# Survey of Graduate Students and Postdoctorates in Science and Engineering: Fall 2019

**Data Tables | NSF 21-318 | March 31, 2021**

# General Notes

This report presents data from the 2019 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS). The GSS is an annual census of all U.S. academic institutions granting research-based master's degrees or doctorates in science, engineering, and selected health fields as of fall of the survey year. Results are used to assess shifts in graduate enrollment and postdoc appointments and trends in financial support.

The GSS is sponsored by National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation and by the National Institutes of Health.

The tables in this report provide detailed data on master's and doctoral graduate students and postdoctoral appointees in science, engineering, and selected health fields. Trend data are provided on graduate student enrollment, postdoctoral appointments, and other doctorate-holding nonfaculty researcher (NFR) appointments, as well as counts of master's and doctoral students, postdoctoral appointees, and NFRs by characteristics, such as sex, race and ethnicity, citizenship, field of study, and primary source and mechanism of support.

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## Demographic Characteristics: 2019



## Financial Support: 2019



## Fields Of Study: 2019

## Institutional Characteristics: 2019

TABLE 1-1

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health: 1975–2019

(Number)

| Year | Graduate students | | | | Postdoctoral appointees | | | | Nonfaculty researchers | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All fields | Science | Engineering | Health | All fields | Science | Engineering | Health | All fields | Science | Engineering | Health |
| 1975 | 328,510 | 234,649 | 68,332 | 25,529 | na | na | na | na | na | na | na | na |
| 1976 | 333,716 | 238,675 | 66,723 | 28,318 | na | na | na | na | na | na | na | na |
| 1977 | 345,374 | 242,932 | 68,757 | 33,685 | na | na | na | na | na | na | na | na |
| 1978[a] | 339,912 | 236,465 | 67,787 | 35,660 | na | na | na | na | na | na | na | na |
| 1979 | 357,578 | 247,235 | 71,808 | 38,535 | 18,101 | 12,519 | 1,067 | 4,515 | 2,687 | 1,915 | 273 | 499 |
| 1980 | 367,078 | 251,265 | 74,335 | 41,478 | 18,399 | 13,042 | 981 | 4,376 | 3,260 | 2,184 | 423 | 653 |
| 1981 | 375,130 | 252,404 | 79,585 | 43,141 | 19,634 | 13,731 | 1,040 | 4,863 | 3,559 | 2,445 | 503 | 611 |
| 1982 | 382,291 | 255,146 | 83,720 | 43,425 | 19,363 | 13,698 | 980 | 4,685 | 4,026 | 2,809 | 670 | 547 |
| 1983 | 390,432 | 255,820 | 91,146 | 43,466 | 20,712 | 14,562 | 1,108 | 5,042 | 4,896 | 3,348 | 631 | 917 |
| 1984 | 394,670 | 256,903 | 92,739 | 45,028 | 21,535 | 14,979 | 1,203 | 5,353 | 5,042 | 3,442 | 589 | 1,011 |
| 1985 | 404,021 | 261,973 | 96,018 | 46,030 | 22,387 | 15,576 | 1,356 | 5,455 | 5,103 | 3,529 | 615 | 959 |
| 1986 | 415,520 | 266,077 | 101,905 | 47,538 | 23,721 | 16,512 | 1,405 | 5,804 | 4,846 | 3,356 | 521 | 969 |
| 1987 | 421,497 | 269,256 | 103,983 | 48,258 | 24,881 | 17,369 | 1,446 | 6,066 | 4,597 | 3,250 | 443 | 904 |
| 1988 | 424,523 | 272,309 | 102,854 | 49,360 | 26,123 | 18,024 | 1,690 | 6,409 | 4,869 | 3,348 | 566 | 955 |
| 1989 | 434,478 | 278,577 | 104,065 | 51,836 | 27,932 | 18,978 | 1,928 | 7,026 | 4,908 | 3,470 | 581 | 857 |
| 1990 | 452,113 | 289,383 | 107,658 | 55,072 | 29,565 | 19,853 | 1,950 | 7,762 | 5,255 | 3,745 | 609 | 901 |
| 1991 | 471,212 | 299,057 | 113,535 | 58,620 | 30,865 | 20,595 | 2,262 | 8,008 | 5,478 | 3,872 | 659 | 947 |
| 1992 | 493,522 | 312,478 | 118,039 | 63,005 | 32,747 | 21,514 | 2,369 | 8,864 | 5,482 | 3,660 | 737 | 1,085 |
| 1993 | 504,304 | 318,851 | 116,872 | 68,581 | 34,322 | 22,219 | 2,446 | 9,657 | 6,001 | 4,003 | 805 | 1,193 |
| 1994 | 504,399 | 318,118 | 113,024 | 73,257 | 36,377 | 23,181 | 2,606 | 10,590 | 6,209 | 4,156 | 825 | 1,228 |
| 1995 | 499,640 | 315,265 | 107,201 | 77,174 | 35,926 | 23,512 | 2,648 | 9,766 | 6,534 | 4,395 | 789 | 1,350 |
| 1996 | 494,079 | 311,957 | 103,224 | 78,898 | 37,107 | 23,892 | 2,677 | 10,538 | 6,604 | 4,426 | 731 | 1,447 |
| 1997 | 487,208 | 306,482 | 101,148 | 79,578 | 38,481 | 24,293 | 2,971 | 11,217 | 6,722 | 4,408 | 848 | 1,466 |
| 1998 | 485,627 | 304,818 | 100,038 | 80,771 | 40,086 | 25,023 | 2,853 | 12,210 | 7,100 | 4,497 | 810 | 1,793 |
| 1999 | 493,256 | 309,491 | 101,691 | 82,074 | 40,800 | 25,784 | 3,196 | 11,820 | 7,573 | 4,761 | 940 | 1,872 |
| 2000 | 493,311 | 309,424 | 104,112 | 79,775 | 43,115 | 26,911 | 3,313 | 12,891 | 7,879 | 4,931 | 896 | 2,052 |
| 2001 | 509,607 | 319,736 | 109,493 | 80,378 | 43,311 | 27,044 | 3,152 | 13,115 | 7,531 | 4,707 | 801 | 2,023 |
| 2002 | 540,404 | 335,166 | 119,668 | 85,570 | 45,034 | 28,371 | 3,566 | 13,097 | 7,906 | 5,019 | 903 | 1,984 |
| 2003 | 567,121 | 347,268 | 127,377 | 92,476 | 46,728 | 29,856 | 3,810 | 13,062 | 8,473 | 5,493 | 952 | 2,028 |
| 2004 | 574,463 | 352,307 | 123,566 | 98,590 | 47,240 | 30,116 | 3,949 | 13,175 | 9,075 | 5,880 | 1,043 | 2,152 |
| 2005 | 582,226 | 357,710 | 120,565 | 103,951 | 48,555 | 30,290 | 4,166 | 14,099 | 9,527 | 6,069 | 946 | 2,512 |
| 2006 | 597,643 | 363,246 | 123,041 | 111,356 | 49,343 | 30,245 | 4,642 | 14,456 | 10,814 | 6,658 | 1,118 | 3,038 |
| 2007old[b] | 607,823 | 372,120 | 130,255 | 105,448 | 50,712 | 30,986 | 4,908 | 14,818 | 10,736 | 6,517 | 1,298 | 2,921 |
| 2007new[b] | 619,499 | 384,523 | 131,676 | 103,300 | 50,840 | 31,281 | 4,942 | 14,617 | 10,752 | 6,526 | 1,310 | 2,916 |
| 2008 | 631,489 | 391,419 | 137,856 | 102,214 | 54,164 | 32,741 | 5,462 | 15,961 | 13,747 | 8,669 | 1,419 | 3,659 |
| 2009 | 631,645 | 401,008 | 144,677 | 85,960 | 57,805 | 34,388 | 6,416 | 17,001 | 14,059 | 8,698 | 1,737 | 3,624 |
| 2010[c,d] | 632,652 | 407,291 | 149,241 | 76,120 | 63,439 | 37,351 | 6,969 | 19,119 | 21,345 | 12,751 | 2,406 | 6,188 |
| 2011[d] | 626,820 | 414,440 | 146,501 | 65,879 | 62,639 | 37,335 | 6,786 | 18,518 | 21,498 | 13,363 | 2,312 | 5,823 |
| 2012 | 627,243 | 413,033 | 148,385 | 65,825 | 62,851 | 36,738 | 7,103 | 19,010 | 21,908 | 13,264 | 2,497 | 6,147 |
| 2013 | 633,010 | 417,251 | 153,049 | 62,710 | 61,942 | 36,289 | 7,106 | 18,547 | 22,465 | 13,932 | 2,494 | 6,039 |
| 2014old[e] | 650,738 | 425,148 | 162,013 | 63,577 | 62,379 | 36,184 | 7,292 | 18,903 | 23,290 | 14,283 | 2,744 | 6,263 |
| 2014new[e] | 666,586 | 437,395 | 164,488 | 64,703 | 63,593 | 37,316 | 7,307 | 18,970 | 23,706 | 14,674 | 2,745 | 6,287 |
| 2015 | 685,397 | 448,654 | 169,354 | 67,389 | 63,861 | 37,639 | 7,656 | 18,566 | 25,292 | 15,667 | 2,929 | 6,696 |
| 2016 | 684,825 | 452,046 | 168,443 | 64,336 | 64,712 | 37,941 | 7,796 | 18,975 | 25,747 | 15,940 | 3,155 | 6,652 |
| 2017old[f] | 684,096 | 450,343 | 166,819 | 66,934 | 64,888 | 37,816 | 7,929 | 19,143 | na | na | na | na |
| 2017new[f] | 649,112 | 415,568 | 165,581 | 67,963 | 64,733 | 38,241 | 7,839 | 18,653 | 28,180 | 17,268 | 3,274 | 7,638 |
| 2018 | 668,307 | 432,255 | 163,301 | 72,751 | 64,783 | 37,564 | 7,914 | 19,305 | 29,284 | 18,278 | 3,570 | 7,436 |

TABLE 1-1

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health: 1975–2019

(Number)

| Year | Graduate students | | | | Postdoctoral appointees | | | | Nonfaculty researchers | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All fields | Science | Engineering | Health | All fields | Science | Engineering | Health | All fields | Science | Engineering | Health |
| 2019 | 690,117 | 453,691 | 164,004 | 72,422 | 66,247 | 38,503 | 8,266 | 19,478 | 30,349 | 18,819 | 3,909 | 7,621 |
| Master's students | | | | | | | | | | | | |
| 2017new[f] | 378,587 | 229,169 | 96,756 | 52,662 | na | na | na | na | na | na | na | na |
| 2018 | 391,211 | 241,327 | 93,064 | 56,820 | na | na | na | na | na | na | na | na |
| 2019 | 408,228 | 259,795 | 91,939 | 56,494 | na | na | na | na | na | na | na | na |
| Doctoral students | | | | | | | | | | | | |
| 2017new[f] | 270,525 | 186,399 | 68,825 | 15,301 | na | na | na | na | na | na | na | na |
| 2018 | 277,096 | 190,928 | 70,237 | 15,931 | na | na | na | na | na | na | na | na |
| 2019 | 281,889 | 193,896 | 72,065 | 15,928 | na | na | na | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017, and counts of postdoctoral appointees (postdocs) and nonfaculty researchers (NFRs) were not collected until 1979.

[a] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] In 2010, the postdoc and NFR section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[d] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[e] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[f] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Due to changes in reporting, NFR estimates for 2017old are not available.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-2a

## Sex of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health: 1977–2019

(Number and percent)

| Year | Graduate students | | | | | Postdoctoral appointees | | | | | Doctorate-holding nonfaculty researchers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Male | | Female | | Total | Male | | Female | | Total | Male | | Female | |
| | | Number | Percent | Number | Percent | | Number | Percent | Number | Percent | | Number | Percent | Number | Percent |
| 1977 | 345,374 | 244,924 | 70.9 | 100,450 | 29.1 | na | na | na | na | na | na | na | na | na | na |
| 1978 | 339,912 | NA | NA | NA | NA | na | na | na | na | na | na | na | na | na | na |
| 1979 | 357,578 | 240,839 | 67.4 | 116,739 | 32.6 | 18,101 | 14,761 | 81.5 | 3,340 | 18.5 | 2,687 | 2,076 | 77.3 | 611 | 22.7 |
| 1980 | 367,078 | 242,956 | 66.2 | 124,122 | 33.8 | 18,399 | 14,856 | 80.7 | 3,543 | 19.3 | 3,260 | 2,571 | 78.9 | 689 | 21.1 |
| 1981 | 375,130 | 243,558 | 64.9 | 131,572 | 35.1 | 19,634 | 15,554 | 79.2 | 4,080 | 20.8 | 3,559 | 2,809 | 78.9 | 750 | 21.1 |
| 1982 | 382,291 | 246,298 | 64.4 | 135,993 | 35.6 | 19,363 | 14,992 | 77.4 | 4,371 | 22.6 | 4,026 | 3,183 | 79.1 | 843 | 20.9 |
| 1983 | 390,432 | 250,928 | 64.3 | 139,504 | 35.7 | 20,712 | 15,919 | 76.9 | 4,793 | 23.1 | 4,896 | 3,915 | 80.0 | 981 | 20.0 |
| 1984 | 394,670 | 252,653 | 64.0 | 142,017 | 36.0 | 21,535 | 16,494 | 76.6 | 5,041 | 23.4 | 5,042 | 3,896 | 77.3 | 1,146 | 22.7 |
| 1985 | 404,021 | 258,216 | 63.9 | 145,805 | 36.1 | 22,387 | 16,973 | 75.8 | 5,414 | 24.2 | 5,103 | 3,826 | 75.0 | 1,277 | 25.0 |
| 1986 | 415,520 | 264,733 | 63.7 | 150,787 | 36.3 | 23,721 | 17,741 | 74.8 | 5,980 | 25.2 | 4,846 | 3,586 | 74.0 | 1,260 | 26.0 |
| 1987 | 421,497 | 267,941 | 63.6 | 153,556 | 36.4 | 24,881 | 18,498 | 74.3 | 6,383 | 25.7 | 4,597 | 3,354 | 73.0 | 1,243 | 27.0 |
| 1988 | 424,523 | 265,390 | 62.5 | 159,133 | 37.5 | 26,123 | 19,321 | 74.0 | 6,802 | 26.0 | 4,869 | 3,603 | 74.0 | 1,266 | 26.0 |
| 1989 | 434,478 | 268,725 | 61.9 | 165,753 | 38.1 | 27,932 | 20,560 | 73.6 | 7,372 | 26.4 | 4,908 | 3,623 | 73.8 | 1,285 | 26.2 |
| 1990 | 452,113 | 275,672 | 61.0 | 176,441 | 39.0 | 29,565 | 21,572 | 73.0 | 7,993 | 27.0 | 5,255 | 3,879 | 73.8 | 1,376 | 26.2 |
| 1991 | 471,212 | 284,897 | 60.5 | 186,315 | 39.5 | 30,865 | 22,406 | 72.6 | 8,459 | 27.4 | 5,478 | 4,026 | 73.5 | 1,452 | 26.5 |
| 1992 | 493,522 | 294,222 | 59.6 | 199,300 | 40.4 | 32,747 | 23,450 | 71.6 | 9,297 | 28.4 | 5,482 | 4,036 | 73.6 | 1,446 | 26.4 |
| 1993 | 504,304 | 294,476 | 58.4 | 209,828 | 41.6 | 34,322 | 24,381 | 71.0 | 9,941 | 29.0 | 6,001 | 4,376 | 72.9 | 1,625 | 27.1 |
| 1994 | 504,399 | 288,355 | 57.2 | 216,044 | 42.8 | 36,377 | 25,471 | 70.0 | 10,906 | 30.0 | 6,209 | 4,487 | 72.3 | 1,722 | 27.7 |
| 1995 | 499,640 | 279,305 | 55.9 | 220,335 | 44.1 | 35,926 | 25,024 | 69.7 | 10,902 | 30.3 | 6,534 | 4,785 | 73.2 | 1,749 | 26.8 |
| 1996 | 494,079 | 271,660 | 55.0 | 222,419 | 45.0 | 37,107 | 25,841 | 69.6 | 11,266 | 30.4 | 6,604 | 4,692 | 71.0 | 1,912 | 29.0 |
| 1997 | 487,208 | 264,497 | 54.3 | 222,711 | 45.7 | 38,481 | 26,506 | 68.9 | 11,975 | 31.1 | 6,722 | 4,733 | 70.4 | 1,989 | 29.6 |
| 1998 | 485,627 | 261,019 | 53.7 | 224,608 | 46.3 | 40,086 | 27,249 | 68.0 | 12,837 | 32.0 | 7,100 | 4,985 | 70.2 | 2,115 | 29.8 |
| 1999 | 493,256 | 262,675 | 53.3 | 230,581 | 46.7 | 40,800 | 27,831 | 68.2 | 12,969 | 31.8 | 7,573 | 5,244 | 69.2 | 2,329 | 30.8 |
| 2000 | 493,311 | 262,109 | 53.1 | 231,202 | 46.9 | 43,115 | 29,606 | 68.7 | 13,509 | 31.3 | 7,879 | 5,493 | 69.7 | 2,386 | 30.3 |
| 2001 | 509,607 | 271,155 | 53.2 | 238,452 | 46.8 | 43,311 | 29,310 | 67.7 | 14,001 | 32.3 | 7,531 | 5,041 | 66.9 | 2,490 | 33.1 |
| 2002 | 540,404 | 287,059 | 53.1 | 253,345 | 46.9 | 45,034 | 29,850 | 66.3 | 15,184 | 33.7 | 7,906 | 5,329 | 67.4 | 2,577 | 32.6 |
| 2003 | 567,121 | 298,682 | 52.7 | 268,439 | 47.3 | 46,728 | 30,692 | 65.7 | 16,036 | 34.3 | 8,473 | 5,700 | 67.3 | 2,773 | 32.7 |
| 2004 | 574,463 | 296,714 | 51.7 | 277,749 | 48.3 | 47,240 | 30,867 | 65.3 | 16,373 | 34.7 | 9,075 | 6,049 | 66.7 | 3,026 | 33.3 |
| 2005 | 582,226 | 295,291 | 50.7 | 286,935 | 49.3 | 48,555 | 31,515 | 64.9 | 17,040 | 35.1 | 9,527 | 6,305 | 66.2 | 3,222 | 33.8 |
| 2006 | 597,643 | 299,818 | 50.2 | 297,825 | 49.8 | 49,343 | 31,760 | 64.4 | 17,583 | 35.6 | 10,814 | 7,190 | 66.5 | 3,624 | 33.5 |
| 2007old[a] | 607,823 | 308,152 | 50.7 | 299,671 | 49.3 | 50,712 | 32,860 | 64.8 | 17,852 | 35.2 | 10,736 | 7,060 | 65.8 | 3,676 | 34.2 |
| 2007new[a] | 619,499 | 312,009 | 50.4 | 307,490 | 49.6 | 50,840 | 32,942 | 64.8 | 17,898 | 35.2 | 10,752 | 7,065 | 65.7 | 3,687 | 34.3 |
| 2008 | 631,489 | 320,310 | 50.7 | 311,179 | 49.3 | 54,164 | 33,943 | 62.7 | 20,221 | 37.3 | 13,747 | 8,667 | 63.0 | 5,080 | 37.0 |
| 2009 | 631,645 | 328,525 | 52.0 | 303,120 | 48.0 | 57,805 | 35,987 | 62.3 | 21,818 | 37.7 | 14,059 | 8,795 | 62.6 | 5,264 | 37.4 |

TABLE 1-2a

## Sex of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health: 1977–2019

(Number and percent)

| Year | Graduate students | | | | | Postdoctoral appointees | | | | | Doctorate-holding nonfaculty researchers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | | Female | | | Male | | Female | | | Male | | Female | |
| | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 2010[b,c] | 632,652 | 335,481 | 53.0 | 297,171 | 47.0 | 63,439 | 38,869 | 61.3 | 24,570 | 38.7 | 21,345 | 12,927 | 60.6 | 8,418 | 39.4 |
| 2011[c] | 626,820 | 335,270 | 53.5 | 291,550 | 46.5 | 62,639 | 38,167 | 60.9 | 24,472 | 39.1 | 21,498 | 13,105 | 61.0 | 8,393 | 39.0 |
| 2012 | 627,243 | 336,187 | 53.6 | 291,056 | 46.4 | 62,851 | 38,166 | 60.7 | 24,685 | 39.3 | 21,908 | 13,250 | 60.5 | 8,658 | 39.5 |
| 2013 | 633,010 | 341,630 | 54.0 | 291,380 | 46.0 | 61,942 | 37,585 | 60.7 | 24,357 | 39.3 | 22,465 | 13,617 | 60.6 | 8,848 | 39.4 |
| 2014old[d] | 650,738 | 356,011 | 54.7 | 294,727 | 45.3 | 62,379 | 37,752 | 60.5 | 24,627 | 39.5 | 23,290 | 14,099 | 60.5 | 9,191 | 39.5 |
| 2014new[d] | 666,586 | 365,841 | 54.9 | 300,745 | 45.1 | 63,593 | 38,491 | 60.5 | 25,102 | 39.5 | 23,706 | 14,314 | 60.4 | 9,392 | 39.6 |
| 2015 | 685,397 | 376,296 | 54.9 | 309,101 | 45.1 | 63,861 | 38,566 | 60.4 | 25,295 | 39.6 | 25,292 | 15,249 | 60.3 | 10,043 | 39.7 |
| 2016 | 684,825 | 375,569 | 54.8 | 309,256 | 45.2 | 64,712 | 39,118 | 60.4 | 25,594 | 39.6 | 25,747 | 15,437 | 60.0 | 10,310 | 40.0 |
| 2017old[e] | 684,096 | 369,326 | 54.0 | 314,770 | 46.0 | 64,888 | 38,936 | 60.0 | 25,952 | 40.0 | na | na | na | na | na |
| 2017new[e] | 649,112 | 356,447 | 54.9 | 292,665 | 45.1 | 64,733 | 38,870 | 60.0 | 25,863 | 40.0 | 28,180 | 16,580 | 58.8 | 11,600 | 41.2 |
| 2018 | 668,307 | 359,333 | 53.8 | 308,974 | 46.2 | 64,783 | 38,661 | 59.7 | 26,122 | 40.3 | 29,284 | 17,468 | 59.7 | 11,816 | 40.3 |
| 2019 | 690,117 | 364,995 | 52.9 | 325,122 | 47.1 | 66,247 | 39,173 | 59.1 | 27,074 | 40.9 | 30,349 | 17,980 | 59.2 | 12,369 | 40.8 |
| Master's students | | | | | | | | | | | | | | | |
| 2017new[e] | 378,587 | 200,748 | 53.0 | 177,839 | 47.0 | na | na | na | na | na | na | na | na | na | na |
| 2018 | 391,211 | 201,314 | 51.5 | 189,897 | 48.5 | na | na | na | na | na | na | na | na | na | na |
| 2019 | 408,228 | 205,768 | 50.4 | 202,460 | 49.6 | na | na | na | na | na | na | na | na | na | na |
| Doctoral students | | | | | | | | | | | | | | | |
| 2017new[e] | 270,525 | 155,699 | 57.6 | 114,826 | 42.4 | na | na | na | na | na | na | na | na | na | na |
| 2018 | 277,096 | 158,019 | 57.0 | 119,077 | 43.0 | na | na | na | na | na | na | na | na | na | na |
| 2019 | 281,889 | 159,227 | 56.5 | 122,662 | 43.5 | na | na | na | na | na | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017, and data on postdoctoral appointees (postdocs) and nonfaculty researchers (NFRs) were not collected until 1979. NA = not available; master's-granting institutions were not surveyed in 1978, and the survey of doctorate-granting institutions did not collect data by sex.

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[b] In 2010, the postdoctoral (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[c] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[e] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Due to changes in reporting, NFR estimates for 2017old are not available.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-2b

## Sex of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science: 1977–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | | Doctorate-holding nonfaculty researchers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | | Female | | | Male | | Female | | | Male | | Female | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 1977 | 242,932 | 168,724 | 69.5 | 74,208 | 30.5 | na | na | na | na | na | na | na | na | na | na |
| 1978 | 236,465 | NA | NA | NA | NA | na | na | na | na | na | na | na | na | na | na |
| 1979 | 247,235 | 163,845 | 66.3 | 83,390 | 33.7 | 12,519 | 10,045 | 80.2 | 2,474 | 19.8 | 1,915 | 1,448 | 75.6 | 467 | 24.4 |
| 1980 | 251,265 | 163,212 | 65.0 | 88,053 | 35.0 | 13,042 | 10,427 | 79.9 | 2,615 | 20.1 | 2,184 | 1,662 | 76.1 | 522 | 23.9 |
| 1981 | 252,404 | 160,306 | 63.5 | 92,098 | 36.5 | 13,731 | 10,859 | 79.1 | 2,872 | 20.9 | 2,445 | 1,910 | 78.1 | 535 | 21.9 |
| 1982 | 255,146 | 160,354 | 62.8 | 94,792 | 37.2 | 13,698 | 10,538 | 76.9 | 3,160 | 23.1 | 2,809 | 2,177 | 77.5 | 632 | 22.5 |
| 1983 | 255,820 | 159,126 | 62.2 | 96,694 | 37.8 | 14,562 | 11,191 | 76.9 | 3,371 | 23.1 | 3,348 | 2,659 | 79.4 | 689 | 20.6 |
| 1984 | 256,903 | 159,672 | 62.2 | 97,231 | 37.8 | 14,979 | 11,446 | 76.4 | 3,533 | 23.6 | 3,442 | 2,654 | 77.1 | 788 | 22.9 |
| 1985 | 261,973 | 162,435 | 62.0 | 99,538 | 38.0 | 15,576 | 11,724 | 75.3 | 3,852 | 24.7 | 3,529 | 2,637 | 74.7 | 892 | 25.3 |
| 1986 | 266,077 | 164,075 | 61.7 | 102,002 | 38.3 | 16,512 | 12,288 | 74.4 | 4,224 | 25.6 | 3,356 | 2,456 | 73.2 | 900 | 26.8 |
| 1987 | 269,256 | 165,060 | 61.3 | 104,196 | 38.7 | 17,369 | 12,845 | 74.0 | 4,524 | 26.0 | 3,250 | 2,379 | 73.2 | 871 | 26.8 |
| 1988 | 272,309 | 164,199 | 60.3 | 108,110 | 39.7 | 18,024 | 13,282 | 73.7 | 4,742 | 26.3 | 3,348 | 2,483 | 74.2 | 865 | 25.8 |
| 1989 | 278,577 | 166,313 | 59.7 | 112,264 | 40.3 | 18,978 | 13,845 | 73.0 | 5,133 | 27.0 | 3,470 | 2,554 | 73.6 | 916 | 26.4 |
| 1990 | 289,383 | 170,340 | 58.9 | 119,043 | 41.1 | 19,853 | 14,426 | 72.7 | 5,427 | 27.3 | 3,745 | 2,804 | 74.9 | 941 | 25.1 |
| 1991 | 299,057 | 173,925 | 58.2 | 125,132 | 41.8 | 20,595 | 14,882 | 72.3 | 5,713 | 27.7 | 3,872 | 2,862 | 73.9 | 1,010 | 26.1 |
| 1992 | 312,478 | 179,486 | 57.4 | 132,992 | 42.6 | 21,514 | 15,336 | 71.3 | 6,178 | 28.7 | 3,660 | 2,727 | 74.5 | 933 | 25.5 |
| 1993 | 318,851 | 180,001 | 56.5 | 138,850 | 43.5 | 22,219 | 15,724 | 70.8 | 6,495 | 29.2 | 4,003 | 2,930 | 73.2 | 1,073 | 26.8 |
| 1994 | 318,118 | 177,057 | 55.7 | 141,061 | 44.3 | 23,181 | 16,218 | 70.0 | 6,963 | 30.0 | 4,156 | 3,022 | 72.7 | 1,134 | 27.3 |
| 1995 | 315,265 | 173,068 | 54.9 | 142,197 | 45.1 | 23,512 | 16,335 | 69.5 | 7,177 | 30.5 | 4,395 | 3,245 | 73.8 | 1,150 | 26.2 |
| 1996 | 311,957 | 168,540 | 54.0 | 143,417 | 46.0 | 23,892 | 16,585 | 69.4 | 7,307 | 30.6 | 4,426 | 3,185 | 72.0 | 1,241 | 28.0 |
| 1997 | 306,482 | 163,191 | 53.2 | 143,291 | 46.8 | 24,293 | 16,745 | 68.9 | 7,548 | 31.1 | 4,408 | 3,151 | 71.5 | 1,257 | 28.5 |
| 1998 | 304,818 | 160,379 | 52.6 | 144,439 | 47.4 | 25,023 | 17,080 | 68.3 | 7,943 | 31.7 | 4,497 | 3,182 | 70.8 | 1,315 | 29.2 |
| 1999 | 309,491 | 160,982 | 52.0 | 148,509 | 48.0 | 25,784 | 17,545 | 68.0 | 8,239 | 32.0 | 4,761 | 3,312 | 69.6 | 1,449 | 30.4 |
| 2000 | 309,424 | 159,691 | 51.6 | 149,733 | 48.4 | 26,911 | 18,456 | 68.6 | 8,455 | 31.4 | 4,931 | 3,447 | 69.9 | 1,484 | 30.1 |
| 2001 | 319,736 | 164,574 | 51.5 | 155,162 | 48.5 | 27,044 | 18,275 | 67.6 | 8,769 | 32.4 | 4,707 | 3,150 | 66.9 | 1,557 | 33.1 |
| 2002 | 335,166 | 171,516 | 51.2 | 163,650 | 48.8 | 28,371 | 18,844 | 66.4 | 9,527 | 33.6 | 5,019 | 3,369 | 67.1 | 1,650 | 32.9 |
| 2003 | 347,268 | 176,458 | 50.8 | 170,810 | 49.2 | 29,856 | 19,675 | 65.9 | 10,181 | 34.1 | 5,493 | 3,691 | 67.2 | 1,802 | 32.8 |
| 2004 | 352,307 | 177,714 | 50.4 | 174,593 | 49.6 | 30,116 | 19,835 | 65.9 | 10,281 | 34.1 | 5,880 | 3,877 | 65.9 | 2,003 | 34.1 |
| 2005 | 357,710 | 178,297 | 49.8 | 179,413 | 50.2 | 30,290 | 19,791 | 65.3 | 10,499 | 34.7 | 6,069 | 4,042 | 66.6 | 2,027 | 33.4 |
| 2006 | 363,246 | 180,084 | 49.6 | 183,162 | 50.4 | 30,245 | 19,542 | 64.6 | 10,703 | 35.4 | 6,658 | 4,460 | 67.0 | 2,198 | 33.0 |
| 2007old[a] | 372,120 | 183,799 | 49.4 | 188,321 | 50.6 | 30,986 | 20,339 | 65.6 | 10,647 | 34.4 | 6,517 | 4,327 | 66.4 | 2,190 | 33.6 |
| 2007new[a] | 384,523 | 187,722 | 48.8 | 196,801 | 51.2 | 31,281 | 20,532 | 65.6 | 10,749 | 34.4 | 6,526 | 4,332 | 66.4 | 2,194 | 33.6 |
| 2008 | 391,419 | 190,959 | 48.8 | 200,460 | 51.2 | 32,741 | 20,760 | 63.4 | 11,981 | 36.6 | 8,669 | 5,497 | 63.4 | 3,172 | 36.6 |
| 2009 | 401,008 | 196,577 | 49.0 | 204,431 | 51.0 | 34,388 | 21,616 | 62.9 | 12,772 | 37.1 | 8,698 | 5,421 | 62.3 | 3,277 | 37.7 |

TABLE 1-2b

## Sex of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science: 1977–2019

(Number and percent)

| Year | Graduate students | | | | | Postdoctoral appointees | | | | | Doctorate-holding nonfaculty researchers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | | Female | | | Male | | Female | | | Male | | Female | |
| | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 2010[b,c] | 407,291 | 201,263 | 49.4 | 206,028 | 50.6 | 37,351 | 23,052 | 61.7 | 14,299 | 38.3 | 12,751 | 7,819 | 61.3 | 4,932 | 38.7 |
| 2011[c] | 414,440 | 205,449 | 49.6 | 208,991 | 50.4 | 37,335 | 23,027 | 61.7 | 14,308 | 38.3 | 13,363 | 8,245 | 61.7 | 5,118 | 38.3 |
| 2012 | 413,033 | 205,036 | 49.6 | 207,997 | 50.4 | 36,738 | 22,662 | 61.7 | 14,076 | 38.3 | 13,264 | 8,167 | 61.6 | 5,097 | 38.4 |
| 2013 | 417,251 | 208,262 | 49.9 | 208,989 | 50.1 | 36,289 | 22,340 | 61.6 | 13,949 | 38.4 | 13,932 | 8,534 | 61.3 | 5,398 | 38.7 |
| 2014old[d] | 425,148 | 215,884 | 50.8 | 209,264 | 49.2 | 36,184 | 22,270 | 61.5 | 13,914 | 38.5 | 14,283 | 8,777 | 61.5 | 5,506 | 38.5 |
| 2014new[d] | 437,395 | 223,592 | 51.1 | 213,803 | 48.9 | 37,316 | 22,953 | 61.5 | 14,363 | 38.5 | 14,674 | 8,977 | 61.2 | 5,697 | 38.8 |
| 2015 | 448,654 | 229,578 | 51.2 | 219,076 | 48.8 | 37,639 | 23,011 | 61.1 | 14,628 | 38.9 | 15,667 | 9,568 | 61.1 | 6,099 | 38.9 |
| 2016 | 452,046 | 231,826 | 51.3 | 220,220 | 48.7 | 37,941 | 23,225 | 61.2 | 14,716 | 38.8 | 15,940 | 9,681 | 60.7 | 6,259 | 39.3 |
| 2017old[e] | 450,343 | 227,482 | 50.5 | 222,861 | 49.5 | 37,816 | 22,991 | 60.8 | 14,825 | 39.2 | na | na | na | na | na |
| 2017new[e] | 415,568 | 214,568 | 51.6 | 201,000 | 48.4 | 38,241 | 23,262 | 60.8 | 14,979 | 39.2 | 17,268 | 10,346 | 59.9 | 6,922 | 40.1 |
| 2018 | 432,255 | 219,433 | 50.8 | 212,822 | 49.2 | 37,564 | 22,749 | 60.6 | 14,815 | 39.4 | 18,278 | 11,026 | 60.3 | 7,252 | 39.7 |
| 2019 | 453,691 | 226,904 | 50.0 | 226,787 | 50.0 | 38,503 | 23,069 | 59.9 | 15,434 | 40.1 | 18,819 | 11,253 | 59.8 | 7,566 | 40.2 |
| Master's students | | | | | | | | | | | | | | | |
| 2017new[e] | 229,169 | 115,056 | 50.2 | 114,113 | 49.8 | na | na | na | na | na | na | na | na | na | na |
| 2018 | 241,327 | 118,413 | 49.1 | 122,914 | 50.9 | na | na | na | na | na | na | na | na | na | na |
| 2019 | 259,795 | 125,525 | 48.3 | 134,270 | 51.7 | na | na | na | na | na | na | na | na | na | na |
| Doctoral students | | | | | | | | | | | | | | | |
| 2017new[e] | 186,399 | 99,512 | 53.4 | 86,887 | 46.6 | na | na | na | na | na | na | na | na | na | na |
| 2018 | 190,928 | 101,020 | 52.9 | 89,908 | 47.1 | na | na | na | na | na | na | na | na | na | na |
| 2019 | 193,896 | 101,379 | 52.3 | 92,517 | 47.7 | na | na | na | na | na | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017, and data on postdoctoral appointees (postdocs) and nonfaculty researchers (NFRs) were not collected until 1979. NA = not available; master's-granting institutions were not surveyed in 1978, and the survey of doctorate-granting institutions did not collect data by sex.

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[b] In 2010, the postdoc and NFR section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[c] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[e] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Due to changes in reporting, NFR estimates for 2017old are not available.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-2c

## Sex of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in engineering: 1977–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | | Doctorate-holding nonfaculty researchers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | | Female | | | Male | | Female | | | Male | | Female | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 1977 | 68,757 | 65,051 | 94.6 | 3,706 | 5.4 | na | na | na | na | na | na | na | na | na | na |
| 1978 | 67,787 | NA | NA | NA | NA | na | na | na | na | na | na | na | na | na | na |
| 1979 | 71,808 | 65,921 | 91.8 | 5,887 | 8.2 | 1,067 | 1,017 | 95.3 | 50 | 4.7 | 273 | 260 | 95.2 | 13 | 4.8 |
| 1980 | 74,335 | 67,995 | 91.5 | 6,340 | 8.5 | 981 | 916 | 93.4 | 65 | 6.6 | 423 | 398 | 94.1 | 25 | 5.9 |
| 1981 | 79,585 | 71,838 | 90.3 | 7,747 | 9.7 | 1,040 | 958 | 92.1 | 82 | 7.9 | 503 | 471 | 93.6 | 32 | 6.4 |
| 1982 | 83,720 | 74,943 | 89.5 | 8,777 | 10.5 | 980 | 896 | 91.4 | 84 | 8.6 | 670 | 638 | 95.2 | 32 | 4.8 |
| 1983 | 91,146 | 81,337 | 89.2 | 9,809 | 10.8 | 1,108 | 1,019 | 92.0 | 89 | 8.0 | 631 | 596 | 94.5 | 35 | 5.5 |
| 1984 | 92,739 | 82,440 | 88.9 | 10,299 | 11.1 | 1,203 | 1,119 | 93.0 | 84 | 7.0 | 589 | 554 | 94.1 | 35 | 5.9 |
| 1985 | 96,018 | 84,935 | 88.5 | 11,083 | 11.5 | 1,356 | 1,255 | 92.6 | 101 | 7.4 | 615 | 564 | 91.7 | 51 | 8.3 |
| 1986 | 101,905 | 89,532 | 87.9 | 12,373 | 12.1 | 1,405 | 1,273 | 90.6 | 132 | 9.4 | 521 | 476 | 91.4 | 45 | 8.6 |
| 1987 | 103,983 | 91,012 | 87.5 | 12,971 | 12.5 | 1,446 | 1,297 | 89.7 | 149 | 10.3 | 443 | 399 | 90.1 | 44 | 9.9 |
| 1988 | 102,854 | 89,726 | 87.2 | 13,128 | 12.8 | 1,690 | 1,518 | 89.8 | 172 | 10.2 | 566 | 515 | 91.0 | 51 | 9.0 |
| 1989 | 104,065 | 90,457 | 86.9 | 13,608 | 13.1 | 1,928 | 1,750 | 90.8 | 178 | 9.2 | 581 | 525 | 90.4 | 56 | 9.6 |
| 1990 | 107,658 | 92,979 | 86.4 | 14,679 | 13.6 | 1,950 | 1,744 | 89.4 | 206 | 10.6 | 609 | 553 | 90.8 | 56 | 9.2 |
| 1991 | 113,535 | 97,837 | 86.2 | 15,698 | 13.8 | 2,262 | 2,024 | 89.5 | 238 | 10.5 | 659 | 600 | 91.0 | 59 | 9.0 |
| 1992 | 118,039 | 100,819 | 85.4 | 17,220 | 14.6 | 2,369 | 2,118 | 89.4 | 251 | 10.6 | 737 | 667 | 90.5 | 70 | 9.5 |
| 1993 | 116,872 | 99,184 | 84.9 | 17,688 | 15.1 | 2,446 | 2,164 | 88.5 | 282 | 11.5 | 805 | 728 | 90.4 | 77 | 9.6 |
| 1994 | 113,024 | 94,974 | 84.0 | 18,050 | 16.0 | 2,606 | 2,272 | 87.2 | 334 | 12.8 | 825 | 734 | 89.0 | 91 | 11.0 |
| 1995 | 107,201 | 89,188 | 83.2 | 18,013 | 16.8 | 2,648 | 2,327 | 87.9 | 321 | 12.1 | 789 | 701 | 88.8 | 88 | 11.2 |
| 1996 | 103,224 | 84,970 | 82.3 | 18,254 | 17.7 | 2,677 | 2,362 | 88.2 | 315 | 11.8 | 731 | 646 | 88.4 | 85 | 11.6 |
| 1997 | 101,148 | 82,428 | 81.5 | 18,720 | 18.5 | 2,971 | 2,625 | 88.4 | 346 | 11.6 | 848 | 733 | 86.4 | 115 | 13.6 |
| 1998 | 100,038 | 81,050 | 81.0 | 18,988 | 19.0 | 2,853 | 2,470 | 86.6 | 383 | 13.4 | 810 | 721 | 89.0 | 89 | 11.0 |
| 1999 | 101,691 | 81,804 | 80.4 | 19,887 | 19.6 | 3,196 | 2,727 | 85.3 | 469 | 14.7 | 940 | 815 | 86.7 | 125 | 13.3 |
| 2000 | 104,112 | 83,366 | 80.1 | 20,746 | 19.9 | 3,313 | 2,840 | 85.7 | 473 | 14.3 | 896 | 783 | 87.4 | 113 | 12.6 |
| 2001 | 109,493 | 87,236 | 79.7 | 22,257 | 20.3 | 3,152 | 2,666 | 84.6 | 486 | 15.4 | 801 | 691 | 86.3 | 110 | 13.7 |
| 2002 | 119,668 | 94,701 | 79.1 | 24,967 | 20.9 | 3,566 | 2,963 | 83.1 | 603 | 16.9 | 903 | 774 | 85.7 | 129 | 14.3 |
| 2003 | 127,377 | 99,790 | 78.3 | 27,587 | 21.7 | 3,810 | 3,207 | 84.2 | 603 | 15.8 | 952 | 816 | 85.7 | 136 | 14.3 |
| 2004 | 123,566 | 96,294 | 77.9 | 27,272 | 22.1 | 3,949 | 3,245 | 82.2 | 704 | 17.8 | 1,043 | 924 | 88.6 | 119 | 11.4 |
| 2005 | 120,565 | 93,670 | 77.7 | 26,895 | 22.3 | 4,166 | 3,436 | 82.5 | 730 | 17.5 | 946 | 824 | 87.1 | 122 | 12.9 |
| 2006 | 123,041 | 95,097 | 77.3 | 27,944 | 22.7 | 4,642 | 3,819 | 82.3 | 823 | 17.7 | 1,118 | 974 | 87.1 | 144 | 12.9 |
| 2007old[a] | 130,255 | 100,281 | 77.0 | 29,974 | 23.0 | 4,908 | 4,073 | 83.0 | 835 | 17.0 | 1,298 | 1,104 | 85.1 | 194 | 14.9 |
| 2007new[a] | 131,676 | 101,204 | 76.9 | 30,472 | 23.1 | 4,942 | 4,099 | 82.9 | 843 | 17.1 | 1,310 | 1,116 | 85.2 | 194 | 14.8 |
| 2008 | 137,856 | 106,319 | 77.1 | 31,537 | 22.9 | 5,462 | 4,359 | 79.8 | 1,103 | 20.2 | 1,419 | 1,169 | 82.4 | 250 | 17.6 |
| 2009 | 144,677 | 111,359 | 77.0 | 33,318 | 23.0 | 6,416 | 5,031 | 78.4 | 1,385 | 21.6 | 1,737 | 1,451 | 83.5 | 286 | 16.5 |

TABLE 1-2c

## Sex of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in engineering: 1977–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | | Doctorate-holding nonfaculty researchers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | | Female | | | Male | | Female | | | Male | | Female | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 2010[b,c] | 149,241 | 114,788 | 76.9 | 34,453 | 23.1 | 6,969 | 5,479 | 78.6 | 1,490 | 21.4 | 2,406 | 1,971 | 81.9 | 435 | 18.1 |
| 2011[c] | 146,501 | 112,760 | 77.0 | 33,741 | 23.0 | 6,786 | 5,287 | 77.9 | 1,499 | 22.1 | 2,312 | 1,895 | 82.0 | 417 | 18.0 |
| 2012 | 148,385 | 113,834 | 76.7 | 34,551 | 23.3 | 7,103 | 5,514 | 77.6 | 1,589 | 22.4 | 2,497 | 2,023 | 81.0 | 474 | 19.0 |
| 2013 | 153,049 | 116,651 | 76.2 | 36,398 | 23.8 | 7,106 | 5,518 | 77.7 | 1,588 | 22.3 | 2,494 | 1,970 | 79.0 | 524 | 21.0 |
| 2014old[d] | 162,013 | 123,056 | 76.0 | 38,957 | 24.0 | 7,292 | 5,650 | 77.5 | 1,642 | 22.5 | 2,744 | 2,148 | 78.3 | 596 | 21.7 |
| 2014new[d] | 164,488 | 124,798 | 75.9 | 39,690 | 24.1 | 7,307 | 5,665 | 77.5 | 1,642 | 22.5 | 2,745 | 2,149 | 78.3 | 596 | 21.7 |
| 2015 | 169,354 | 128,845 | 76.1 | 40,509 | 23.9 | 7,656 | 5,959 | 77.8 | 1,697 | 22.2 | 2,929 | 2,297 | 78.4 | 632 | 21.6 |
| 2016 | 168,443 | 127,088 | 75.4 | 41,355 | 24.6 | 7,796 | 6,074 | 77.9 | 1,722 | 22.1 | 3,155 | 2,438 | 77.3 | 717 | 22.7 |
| 2017old[e] | 166,819 | 125,105 | 75.0 | 41,714 | 25.0 | 7,929 | 6,157 | 77.7 | 1,772 | 22.3 | na | na | na | na | na |
| 2017new[e] | 165,581 | 124,749 | 75.3 | 40,832 | 24.7 | 7,839 | 6,087 | 77.7 | 1,752 | 22.3 | 3,274 | 2,530 | 77.3 | 744 | 22.7 |
| 2018 | 163,301 | 121,935 | 74.7 | 41,366 | 25.3 | 7,914 | 6,046 | 76.4 | 1,868 | 23.6 | 3,570 | 2,749 | 77.0 | 821 | 23.0 |
| 2019 | 164,004 | 120,821 | 73.7 | 43,183 | 26.3 | 8,266 | 6,282 | 76.0 | 1,984 | 24.0 | 3,909 | 2,990 | 76.5 | 919 | 23.5 |
| Master's students | | | | | | | | | | | | | | | |
| 2017new[e] | 96,756 | 73,410 | 75.9 | 23,346 | 24.1 | na | na | na | na | na | na | na | na | na | na |
| 2018 | 93,064 | 70,039 | 75.3 | 23,025 | 24.7 | na | na | na | na | na | na | na | na | na | na |
| 2019 | 91,939 | 68,076 | 74.0 | 23,863 | 26.0 | na | na | na | na | na | na | na | na | na | na |
| Doctoral students | | | | | | | | | | | | | | | |
| 2017new[e] | 68,825 | 51,339 | 74.6 | 17,486 | 25.4 | na | na | na | na | na | na | na | na | na | na |
| 2018 | 70,237 | 51,896 | 73.9 | 18,341 | 26.1 | na | na | na | na | na | na | na | na | na | na |
| 2019 | 72,065 | 52,745 | 73.2 | 19,320 | 26.8 | na | na | na | na | na | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017, and data on postdoctoral appointees (postdocs) and nonfaculty researchers (NFRs) were not collected until 1979. NA = not available; master's-granting institutions were not surveyed in 1978, and the survey of doctorate-granting institutions did not collect data by sex.

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[b] In 2010, the postdoc and NFR section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[c] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[e] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Due to changes in reporting, NFR estimates for 2017old are not available.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-2d

## Sex of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in health: 1977–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | | Doctorate-holding nonfaculty researchers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | | Female | | | Male | | Female | | | Male | | Female | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 1977 | 33,685 | 11,149 | 33.1 | 22,536 | 66.9 | na | na | na | na | na | na | na | na | na | na |
| 1978 | 35,660 | NA | NA | NA | NA | na | na | na | na | na | na | na | na | na | na |
| 1979 | 38,535 | 11,073 | 28.7 | 27,462 | 71.3 | 4,515 | 3,699 | 81.9 | 816 | 18.1 | 499 | 368 | 73.7 | 131 | 26.3 |
| 1980 | 41,478 | 11,749 | 28.3 | 29,729 | 71.7 | 4,376 | 3,513 | 80.3 | 863 | 19.7 | 653 | 511 | 78.3 | 142 | 21.7 |
| 1981 | 43,141 | 11,414 | 26.5 | 31,727 | 73.5 | 4,863 | 3,737 | 76.8 | 1,126 | 23.2 | 611 | 428 | 70.0 | 183 | 30.0 |
| 1982 | 43,425 | 11,001 | 25.3 | 32,424 | 74.7 | 4,685 | 3,558 | 75.9 | 1,127 | 24.1 | 547 | 368 | 67.3 | 179 | 32.7 |
| 1983 | 43,466 | 10,465 | 24.1 | 33,001 | 75.9 | 5,042 | 3,709 | 73.6 | 1,333 | 26.4 | 917 | 660 | 72.0 | 257 | 28.0 |
| 1984 | 45,028 | 10,541 | 23.4 | 34,487 | 76.6 | 5,353 | 3,929 | 73.4 | 1,424 | 26.6 | 1,011 | 688 | 68.1 | 323 | 31.9 |
| 1985 | 46,030 | 10,846 | 23.6 | 35,184 | 76.4 | 5,455 | 3,994 | 73.2 | 1,461 | 26.8 | 959 | 625 | 65.2 | 334 | 34.8 |
| 1986 | 47,538 | 11,126 | 23.4 | 36,412 | 76.6 | 5,804 | 4,180 | 72.0 | 1,624 | 28.0 | 969 | 654 | 67.5 | 315 | 32.5 |
| 1987 | 48,258 | 11,869 | 24.6 | 36,389 | 75.4 | 6,066 | 4,356 | 71.8 | 1,710 | 28.2 | 904 | 576 | 63.7 | 328 | 36.3 |
| 1988 | 49,360 | 11,465 | 23.2 | 37,895 | 76.8 | 6,409 | 4,521 | 70.5 | 1,888 | 29.5 | 955 | 605 | 63.4 | 350 | 36.6 |
| 1989 | 51,836 | 11,955 | 23.1 | 39,881 | 76.9 | 7,026 | 4,965 | 70.7 | 2,061 | 29.3 | 857 | 544 | 63.5 | 313 | 36.5 |
| 1990 | 55,072 | 12,353 | 22.4 | 42,719 | 77.6 | 7,762 | 5,402 | 69.6 | 2,360 | 30.4 | 901 | 522 | 57.9 | 379 | 42.1 |
| 1991 | 58,620 | 13,135 | 22.4 | 45,485 | 77.6 | 8,008 | 5,500 | 68.7 | 2,508 | 31.3 | 947 | 564 | 59.6 | 383 | 40.4 |
| 1992 | 63,005 | 13,917 | 22.1 | 49,088 | 77.9 | 8,864 | 5,996 | 67.6 | 2,868 | 32.4 | 1,085 | 642 | 59.2 | 443 | 40.8 |
| 1993 | 68,581 | 15,291 | 22.3 | 53,290 | 77.7 | 9,657 | 6,493 | 67.2 | 3,164 | 32.8 | 1,193 | 718 | 60.2 | 475 | 39.8 |
| 1994 | 73,257 | 16,324 | 22.3 | 56,933 | 77.7 | 10,590 | 6,981 | 65.9 | 3,609 | 34.1 | 1,228 | 731 | 59.5 | 497 | 40.5 |
| 1995 | 77,174 | 17,049 | 22.1 | 60,125 | 77.9 | 9,766 | 6,362 | 65.1 | 3,404 | 34.9 | 1,350 | 839 | 62.1 | 511 | 37.9 |
| 1996 | 78,898 | 18,150 | 23.0 | 60,748 | 77.0 | 10,538 | 6,894 | 65.4 | 3,644 | 34.6 | 1,447 | 861 | 59.5 | 586 | 40.5 |
| 1997 | 79,578 | 18,878 | 23.7 | 60,700 | 76.3 | 11,217 | 7,136 | 63.6 | 4,081 | 36.4 | 1,466 | 849 | 57.9 | 617 | 42.1 |
| 1998 | 80,771 | 19,590 | 24.3 | 61,181 | 75.7 | 12,210 | 7,699 | 63.1 | 4,511 | 36.9 | 1,793 | 1,082 | 60.3 | 711 | 39.7 |
| 1999 | 82,074 | 19,889 | 24.2 | 62,185 | 75.8 | 11,820 | 7,559 | 64.0 | 4,261 | 36.0 | 1,872 | 1,117 | 59.7 | 755 | 40.3 |
| 2000 | 79,775 | 19,052 | 23.9 | 60,723 | 76.1 | 12,891 | 8,310 | 64.5 | 4,581 | 35.5 | 2,052 | 1,263 | 61.5 | 789 | 38.5 |
| 2001 | 80,378 | 19,345 | 24.1 | 61,033 | 75.9 | 13,115 | 8,369 | 63.8 | 4,746 | 36.2 | 2,023 | 1,200 | 59.3 | 823 | 40.7 |
| 2002 | 85,570 | 20,842 | 24.4 | 64,728 | 75.6 | 13,097 | 8,043 | 61.4 | 5,054 | 38.6 | 1,984 | 1,186 | 59.8 | 798 | 40.2 |
| 2003 | 92,476 | 22,434 | 24.3 | 70,042 | 75.7 | 13,062 | 7,810 | 59.8 | 5,252 | 40.2 | 2,028 | 1,193 | 58.8 | 835 | 41.2 |
| 2004 | 98,590 | 22,706 | 23.0 | 75,884 | 77.0 | 13,175 | 7,787 | 59.1 | 5,388 | 40.9 | 2,152 | 1,248 | 58.0 | 904 | 42.0 |
| 2005 | 103,951 | 23,324 | 22.4 | 80,627 | 77.6 | 14,099 | 8,288 | 58.8 | 5,811 | 41.2 | 2,512 | 1,439 | 57.3 | 1,073 | 42.7 |
| 2006 | 111,356 | 24,637 | 22.1 | 86,719 | 77.9 | 14,456 | 8,399 | 58.1 | 6,057 | 41.9 | 3,038 | 1,756 | 57.8 | 1,282 | 42.2 |
| 2007old[a] | 105,448 | 24,072 | 22.8 | 81,376 | 77.2 | 14,818 | 8,448 | 57.0 | 6,370 | 43.0 | 2,921 | 1,629 | 55.8 | 1,292 | 44.2 |
| 2007new[a] | 103,300 | 23,083 | 22.3 | 80,217 | 77.7 | 14,617 | 8,311 | 56.9 | 6,306 | 43.1 | 2,916 | 1,617 | 55.5 | 1,299 | 44.5 |
| 2008 | 102,214 | 23,032 | 22.5 | 79,182 | 77.5 | 15,961 | 8,824 | 55.3 | 7,137 | 44.7 | 3,659 | 2,001 | 54.7 | 1,658 | 45.3 |
| 2009 | 85,960 | 20,589 | 24.0 | 65,371 | 76.0 | 17,001 | 9,340 | 54.9 | 7,661 | 45.1 | 3,624 | 1,923 | 53.1 | 1,701 | 46.9 |

TABLE 1-2d

## Sex of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in health: 1977–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | | Doctorate-holding nonfaculty researchers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | | Female | | | Male | | Female | | | Male | | Female | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 2010[b,c] | 76,120 | 19,430 | 25.5 | 56,690 | 74.5 | 19,119 | 10,338 | 54.1 | 8,781 | 45.9 | 6,188 | 3,137 | 50.7 | 3,051 | 49.3 |
| 2011[c] | 65,879 | 17,061 | 25.9 | 48,818 | 74.1 | 18,518 | 9,853 | 53.2 | 8,665 | 46.8 | 5,823 | 2,965 | 50.9 | 2,858 | 49.1 |
| 2012 | 65,825 | 17,317 | 26.3 | 48,508 | 73.7 | 19,010 | 9,990 | 52.6 | 9,020 | 47.4 | 6,147 | 3,060 | 49.8 | 3,087 | 50.2 |
| 2013 | 62,710 | 16,717 | 26.7 | 45,993 | 73.3 | 18,547 | 9,727 | 52.4 | 8,820 | 47.6 | 6,039 | 3,113 | 51.5 | 2,926 | 48.5 |
| 2014old[d] | 63,577 | 17,071 | 26.9 | 46,506 | 73.1 | 18,903 | 9,832 | 52.0 | 9,071 | 48.0 | 6,263 | 3,174 | 50.7 | 3,089 | 49.3 |
| 2014new[d] | 64,703 | 17,451 | 27.0 | 47,252 | 73.0 | 18,970 | 9,873 | 52.0 | 9,097 | 48.0 | 6,287 | 3,188 | 50.7 | 3,099 | 49.3 |
| 2015 | 67,389 | 17,873 | 26.5 | 49,516 | 73.5 | 18,566 | 9,596 | 51.7 | 8,970 | 48.3 | 6,696 | 3,384 | 50.5 | 3,312 | 49.5 |
| 2016 | 64,336 | 16,655 | 25.9 | 47,681 | 74.1 | 18,975 | 9,819 | 51.7 | 9,156 | 48.3 | 6,652 | 3,318 | 49.9 | 3,334 | 50.1 |
| 2017old[e] | 66,934 | 16,739 | 25.0 | 50,195 | 75.0 | 19,143 | 9,788 | 51.1 | 9,355 | 48.9 | na | na | na | na | na |
| 2017new[e] | 67,963 | 17,130 | 25.2 | 50,833 | 74.8 | 18,653 | 9,521 | 51.0 | 9,132 | 49.0 | 7,638 | 3,704 | 48.5 | 3,934 | 51.5 |
| 2018 | 72,751 | 17,965 | 24.7 | 54,786 | 75.3 | 19,305 | 9,866 | 51.1 | 9,439 | 48.9 | 7,436 | 3,693 | 49.7 | 3,743 | 50.3 |
| 2019 | 72,422 | 17,270 | 23.8 | 55,152 | 76.2 | 19,478 | 9,822 | 50.4 | 9,656 | 49.6 | 7,621 | 3,737 | 49.0 | 3,884 | 51.0 |
| Master's students | | | | | | | | | | | | | | | |
| 2017new[e] | 52,662 | 12,282 | 23.3 | 40,380 | 76.7 | na | na | na | na | na | na | na | na | na | na |
| 2018 | 56,820 | 12,862 | 22.6 | 43,958 | 77.4 | na | na | na | na | na | na | na | na | na | na |
| 2019 | 56,494 | 12,167 | 21.5 | 44,327 | 78.5 | na | na | na | na | na | na | na | na | na | na |
| Doctoral students | | | | | | | | | | | | | | | |
| 2017new[e] | 15,301 | 4,848 | 31.7 | 10,453 | 68.3 | na | na | na | na | na | na | na | na | na | na |
| 2018 | 15,931 | 5,103 | 32.0 | 10,828 | 68.0 | na | na | na | na | na | na | na | na | na | na |
| 2019 | 15,928 | 5,103 | 32.0 | 10,825 | 68.0 | na | na | na | na | na | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017, and data on postdoctoral appointees (postdocs) and nonfaculty researchers (NFRs) were not collected until 1979. NA = not available; master's-granting institutions were not surveyed in 1978, and the survey of doctorate-granting institutions did not collect data by sex.

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[b] In 2010, the postdoc and NFR section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[c] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[e] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Due to changes in reporting, NFR estimates for 2017old are not available.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-3a

## Citizenship of graduate students and postdoctoral appointees in science, engineering, and health: 1980–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U.S. citizens and permanent residents | | Temporary visa holders | | | U.S. citizens and permanent residents | | Temporary visa holders | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 1980 | 367,078 | 316,776 | 86.3 | 50,302 | 13.7 | 18,399 | 11,893 | 64.6 | 6,506 | 35.4 |
| 1981 | 375,130 | 320,655 | 85.5 | 54,475 | 14.5 | 19,634 | 12,340 | 62.9 | 7,294 | 37.1 |
| 1982 | 382,291 | 314,458 | 82.3 | 67,833 | 17.7 | 19,363 | 12,129 | 62.6 | 7,234 | 37.4 |
| 1983 | 390,432 | 317,185 | 81.2 | 73,247 | 18.8 | 20,712 | 13,193 | 63.7 | 7,519 | 36.3 |
| 1984 | 394,670 | 319,648 | 81.0 | 75,022 | 19.0 | 21,535 | 13,548 | 62.9 | 7,987 | 37.1 |
| 1985 | 404,021 | 324,081 | 80.2 | 79,940 | 19.8 | 22,387 | 13,528 | 60.4 | 8,859 | 39.6 |
| 1986 | 415,520 | 328,234 | 79.0 | 87,286 | 21.0 | 23,721 | 14,041 | 59.2 | 9,680 | 40.8 |
| 1987 | 421,497 | 329,350 | 78.1 | 92,147 | 21.9 | 24,881 | 14,133 | 56.8 | 10,748 | 43.2 |
| 1988 | 424,523 | 327,279 | 77.1 | 97,244 | 22.9 | 26,123 | 14,420 | 55.2 | 11,703 | 44.8 |
| 1989 | 434,478 | 332,503 | 76.5 | 101,975 | 23.5 | 27,932 | 14,863 | 53.2 | 13,069 | 46.8 |
| 1990 | 452,113 | 345,047 | 76.3 | 107,066 | 23.7 | 29,565 | 15,115 | 51.1 | 14,450 | 48.9 |
| 1991 | 471,212 | 358,025 | 76.0 | 113,187 | 24.0 | 30,865 | 15,135 | 49.0 | 15,730 | 51.0 |
| 1992 | 493,522 | 379,605 | 76.9 | 113,917 | 23.1 | 32,747 | 15,800 | 48.2 | 16,947 | 51.8 |
| 1993 | 504,304 | 393,985 | 78.1 | 110,319 | 21.9 | 34,322 | 16,727 | 48.7 | 17,595 | 51.3 |
| 1994 | 504,399 | 397,852 | 78.9 | 106,547 | 21.1 | 36,377 | 17,986 | 49.4 | 18,391 | 50.6 |
| 1995 | 499,640 | 396,755 | 79.4 | 102,885 | 20.6 | 35,926 | 18,142 | 50.5 | 17,784 | 49.5 |
| 1996 | 494,079 | 391,095 | 79.2 | 102,984 | 20.8 | 37,107 | 18,412 | 49.6 | 18,695 | 50.4 |
| 1997 | 487,208 | 383,327 | 78.7 | 103,881 | 21.3 | 38,481 | 18,916 | 49.2 | 19,565 | 50.8 |
| 1998 | 485,627 | 378,560 | 78.0 | 107,067 | 22.0 | 40,086 | 19,710 | 49.2 | 20,376 | 50.8 |
| 1999 | 493,256 | 377,802 | 76.6 | 115,454 | 23.4 | 40,800 | 18,884 | 46.3 | 21,916 | 53.7 |
| 2000 | 493,311 | 364,894 | 74.0 | 128,417 | 26.0 | 43,115 | 19,452 | 45.1 | 23,663 | 54.9 |
| 2001 | 509,607 | 368,737 | 72.4 | 140,870 | 27.6 | 43,311 | 18,379 | 42.4 | 24,932 | 57.6 |
| 2002 | 540,404 | 387,416 | 71.7 | 152,988 | 28.3 | 45,034 | 19,663 | 43.7 | 25,371 | 56.3 |
| 2003 | 567,121 | 412,105 | 72.7 | 155,016 | 27.3 | 46,728 | 19,663 | 42.1 | 27,065 | 57.9 |
| 2004 | 574,463 | 423,218 | 73.7 | 151,245 | 26.3 | 47,240 | 20,156 | 42.7 | 27,084 | 57.3 |
| 2005 | 582,226 | 434,730 | 74.7 | 147,496 | 25.3 | 48,555 | 21,507 | 44.3 | 27,048 | 55.7 |
| 2006 | 597,643 | 446,625 | 74.7 | 151,018 | 25.3 | 49,343 | 21,147 | 42.9 | 28,196 | 57.1 |
| 2007old[a] | 607,823 | 450,251 | 74.1 | 157,572 | 25.9 | 50,712 | 22,022 | 43.4 | 28,690 | 56.6 |
| 2007new[a] | 619,499 | 460,294 | 74.3 | 159,205 | 25.7 | 50,840 | 22,103 | 43.5 | 28,737 | 56.5 |
| 2008 | 631,489 | 463,450 | 73.4 | 168,039 | 26.6 | 54,164 | 24,915 | 46.0 | 29,249 | 54.0 |
| 2009 | 631,645 | 459,648 | 72.8 | 171,997 | 27.2 | 57,805 | 27,105 | 46.9 | 30,700 | 53.1 |
| 2010[b,c] | 632,652 | 458,492 | 72.5 | 174,160 | 27.5 | 63,439 | 30,155 | 47.5 | 33,284 | 52.5 |
| 2011[c] | 626,820 | 450,523 | 71.9 | 176,297 | 28.1 | 62,639 | 29,712 | 47.4 | 32,927 | 52.6 |
| 2012 | 627,243 | 443,697 | 70.7 | 183,546 | 29.3 | 62,851 | 29,864 | 47.5 | 32,987 | 52.5 |
| 2013 | 633,010 | 436,296 | 68.9 | 196,714 | 31.1 | 61,942 | 29,546 | 47.7 | 32,396 | 52.3 |
| 2014old[d] | 650,738 | 429,133 | 65.9 | 221,605 | 34.1 | 62,379 | 29,630 | 47.5 | 32,749 | 52.5 |
| 2014new[d] | 666,586 | 439,309 | 65.9 | 227,277 | 34.1 | 63,593 | 30,095 | 47.3 | 33,498 | 52.7 |
| 2015 | 685,397 | 441,956 | 64.5 | 243,441 | 35.5 | 63,861 | 28,726 | 45.0 | 35,135 | 55.0 |
| 2016 | 684,825 | 436,139 | 63.7 | 248,686 | 36.3 | 64,712 | 29,810 | 46.1 | 34,902 | 53.9 |
| 2017old[e] | 684,096 | 446,676 | 65.3 | 237,420 | 34.7 | 64,888 | 30,197 | 46.5 | 34,691 | 53.5 |
| 2017new[e] | 649,112 | 416,481 | 64.2 | 232,631 | 35.8 | 64,733 | 30,110 | 46.5 | 34,623 | 53.5 |
| 2018 | 668,307 | 438,581 | 65.6 | 229,726 | 34.4 | 64,783 | 29,622 | 45.7 | 35,161 | 54.3 |
| 2019 | 690,117 | 456,504 | 66.1 | 233,613 | 33.9 | 66,247 | 29,452 | 44.5 | 36,795 | 55.5 |
| Master's students | | | | | | | | | | |
| 2017new[e] | 378,587 | 251,896 | 66.5 | 126,691 | 33.5 | na | na | na | na | na |
| 2018 | 391,211 | 271,290 | 69.3 | 119,921 | 30.7 | na | na | na | na | na |

TABLE 1-3a

## Citizenship of graduate students and postdoctoral appointees in science, engineering, and health: 1980–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U.S. citizens and permanent residents | | Temporary visa holders | | | U.S. citizens and permanent residents | | Temporary visa holders | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 2019 | 408,228 | 287,370 | 70.4 | 120,858 | 29.6 | na | na | na | na | na |
| Doctoral students | | | | | | | | | | |
| 2017new[e] | 270,525 | 164,585 | 60.8 | 105,940 | 39.2 | na | na | na | na | na |
| 2018 | 277,096 | 167,291 | 60.4 | 109,805 | 39.6 | na | na | na | na | na |
| 2019 | 281,889 | 169,134 | 60.0 | 112,755 | 40.0 | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017.

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[b] In 2010, the postdoctoral (postdoc) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and nonfaculty researcher (NFR) data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[c] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[e] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-3b

## Citizenship of graduate students and postdoctoral appointees in science: 1980–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U.S. citizens and permanent residents | | Temporary visa holders | | | U.S. citizens and permanent residents | | Temporary visa holders | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 1980 | 251,265 | 220,903 | 87.9 | 30,362 | 12.1 | 13,042 | 8,307 | 63.7 | 4,735 | 36.3 |
| 1981 | 252,404 | 219,762 | 87.1 | 32,642 | 12.9 | 13,731 | 8,504 | 61.9 | 5,227 | 38.1 |
| 1982 | 255,146 | 215,397 | 84.4 | 39,749 | 15.6 | 13,698 | 8,393 | 61.3 | 5,305 | 38.7 |
| 1983 | 255,820 | 213,114 | 83.3 | 42,706 | 16.7 | 14,562 | 9,063 | 62.2 | 5,499 | 37.8 |
| 1984 | 256,903 | 212,717 | 82.8 | 44,186 | 17.2 | 14,979 | 9,248 | 61.7 | 5,731 | 38.3 |
| 1985 | 261,973 | 214,014 | 81.7 | 47,959 | 18.3 | 15,576 | 9,300 | 59.7 | 6,276 | 40.3 |
| 1986 | 266,077 | 214,097 | 80.5 | 51,980 | 19.5 | 16,512 | 9,660 | 58.5 | 6,852 | 41.5 |
| 1987 | 269,256 | 213,882 | 79.4 | 55,374 | 20.6 | 17,369 | 9,835 | 56.6 | 7,534 | 43.4 |
| 1988 | 272,309 | 213,945 | 78.6 | 58,364 | 21.4 | 18,024 | 9,856 | 54.7 | 8,168 | 45.3 |
| 1989 | 278,577 | 217,211 | 78.0 | 61,366 | 22.0 | 18,978 | 10,028 | 52.8 | 8,950 | 47.2 |
| 1990 | 289,383 | 224,792 | 77.7 | 64,591 | 22.3 | 19,853 | 10,056 | 50.7 | 9,797 | 49.3 |
| 1991 | 299,057 | 231,803 | 77.5 | 67,254 | 22.5 | 20,595 | 10,152 | 49.3 | 10,443 | 50.7 |
| 1992 | 312,478 | 244,514 | 78.2 | 67,964 | 21.8 | 21,514 | 10,417 | 48.4 | 11,097 | 51.6 |
| 1993 | 318,851 | 252,480 | 79.2 | 66,371 | 20.8 | 22,219 | 10,792 | 48.6 | 11,427 | 51.4 |
| 1994 | 318,118 | 253,008 | 79.5 | 65,110 | 20.5 | 23,181 | 11,451 | 49.4 | 11,730 | 50.6 |
| 1995 | 315,265 | 252,245 | 80.0 | 63,020 | 20.0 | 23,512 | 11,824 | 50.3 | 11,688 | 49.7 |
| 1996 | 311,957 | 248,907 | 79.8 | 63,050 | 20.2 | 23,892 | 11,880 | 49.7 | 12,012 | 50.3 |
| 1997 | 306,482 | 244,026 | 79.6 | 62,456 | 20.4 | 24,293 | 11,746 | 48.4 | 12,547 | 51.6 |
| 1998 | 304,818 | 240,630 | 78.9 | 64,188 | 21.1 | 25,023 | 12,016 | 48.0 | 13,007 | 52.0 |
| 1999 | 309,491 | 241,066 | 77.9 | 68,425 | 22.1 | 25,784 | 11,707 | 45.4 | 14,077 | 54.6 |
| 2000 | 309,424 | 234,000 | 75.6 | 75,424 | 24.4 | 26,911 | 11,558 | 42.9 | 15,353 | 57.1 |
| 2001 | 319,736 | 237,718 | 74.3 | 82,018 | 25.7 | 27,044 | 11,108 | 41.1 | 15,936 | 58.9 |
| 2002 | 335,166 | 247,842 | 73.9 | 87,324 | 26.1 | 28,371 | 12,407 | 43.7 | 15,964 | 56.3 |
| 2003 | 347,268 | 259,871 | 74.8 | 87,397 | 25.2 | 29,856 | 12,409 | 41.6 | 17,447 | 58.4 |
| 2004 | 352,307 | 265,643 | 75.4 | 86,664 | 24.6 | 30,116 | 12,672 | 42.1 | 17,444 | 57.9 |
| 2005 | 357,710 | 271,962 | 76.0 | 85,748 | 24.0 | 30,290 | 12,665 | 41.8 | 17,625 | 58.2 |
| 2006 | 363,246 | 275,905 | 76.0 | 87,341 | 24.0 | 30,245 | 12,573 | 41.6 | 17,672 | 58.4 |
| 2007old[a] | 372,120 | 282,785 | 76.0 | 89,335 | 24.0 | 30,986 | 13,312 | 43.0 | 17,674 | 57.0 |
| 2007new[a] | 384,523 | 293,792 | 76.4 | 90,731 | 23.6 | 31,281 | 13,513 | 43.2 | 17,768 | 56.8 |
| 2008 | 391,419 | 295,530 | 75.5 | 95,889 | 24.5 | 32,741 | 14,375 | 43.9 | 18,366 | 56.1 |
| 2009 | 401,008 | 303,700 | 75.7 | 97,308 | 24.3 | 34,388 | 15,800 | 45.9 | 18,588 | 54.1 |
| 2010[b,c] | 407,291 | 308,108 | 75.6 | 99,183 | 24.4 | 37,351 | 17,793 | 47.6 | 19,558 | 52.4 |
| 2011[c] | 414,440 | 312,846 | 75.5 | 101,594 | 24.5 | 37,335 | 17,706 | 47.4 | 19,629 | 52.6 |
| 2012 | 413,033 | 308,042 | 74.6 | 104,991 | 25.4 | 36,738 | 17,476 | 47.6 | 19,262 | 52.4 |
| 2013 | 417,251 | 305,563 | 73.2 | 111,688 | 26.8 | 36,289 | 17,551 | 48.4 | 18,738 | 51.6 |
| 2014old[d] | 425,148 | 300,110 | 70.6 | 125,038 | 29.4 | 36,184 | 17,229 | 47.6 | 18,955 | 52.4 |
| 2014new[d] | 437,395 | 308,499 | 70.5 | 128,896 | 29.5 | 37,316 | 17,661 | 47.3 | 19,655 | 52.7 |
| 2015 | 448,654 | 309,182 | 68.9 | 139,472 | 31.1 | 37,639 | 17,072 | 45.4 | 20,567 | 54.6 |
| 2016 | 452,046 | 306,710 | 67.8 | 145,336 | 32.2 | 37,941 | 17,615 | 46.4 | 20,326 | 53.6 |
| 2017old[e] | 450,343 | 310,973 | 69.1 | 139,370 | 30.9 | 37,816 | 17,803 | 47.1 | 20,013 | 52.9 |
| 2017new[e] | 415,568 | 281,057 | 67.6 | 134,511 | 32.4 | 38,241 | 17,993 | 47.1 | 20,248 | 52.9 |
| 2018 | 432,255 | 297,277 | 68.8 | 134,978 | 31.2 | 37,564 | 17,447 | 46.4 | 20,117 | 53.6 |
| 2019 | 453,691 | 312,368 | 68.9 | 141,323 | 31.1 | 38,503 | 17,344 | 45.0 | 21,159 | 55.0 |
| Master's students | | | | | | | | | | |
| 2017new[e] | 229,169 | 156,831 | 68.4 | 72,338 | 31.6 | na | na | na | na | na |
| 2018 | 241,327 | 171,049 | 70.9 | 70,278 | 29.1 | na | na | na | na | na |

TABLE 1-3b

## Citizenship of graduate students and postdoctoral appointees in science: 1980–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U.S. citizens and permanent residents | | Temporary visa holders | | | U.S. citizens and permanent residents | | Temporary visa holders | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 2019 | 259,795 | 185,378 | 71.4 | 74,417 | 28.6 | na | na | na | na | na |
| Doctoral students | | | | | | | | | | |
| 2017new[e] | 186,399 | 124,226 | 66.6 | 62,173 | 33.4 | na | na | na | na | na |
| 2018 | 190,928 | 126,228 | 66.1 | 64,700 | 33.9 | na | na | na | na | na |
| 2019 | 193,896 | 126,990 | 65.5 | 66,906 | 34.5 | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017.

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[b] In 2010, the postdoctoral (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[c] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[e] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**

Percentages may not add to total because of rounding

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-3c

## Citizenship of graduate students and postdoctoral appointees in engineering: 1980–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U.S. citizens and permanent residents | | Temporary visa holders | | | U.S. citizens and permanent residents | | Temporary visa holders | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 1980 | 74,335 | 56,438 | 75.9 | 17,897 | 24.1 | 981 | 303 | 30.9 | 678 | 69.1 |
| 1981 | 79,585 | 59,898 | 75.3 | 19,687 | 24.7 | 1,040 | 332 | 31.9 | 708 | 68.1 |
| 1982 | 83,720 | 58,656 | 70.1 | 25,064 | 29.9 | 980 | 323 | 33.0 | 657 | 67.0 |
| 1983 | 91,146 | 63,649 | 69.8 | 27,497 | 30.2 | 1,108 | 414 | 37.4 | 694 | 62.6 |
| 1984 | 92,739 | 64,832 | 69.9 | 27,907 | 30.1 | 1,203 | 439 | 36.5 | 764 | 63.5 |
| 1985 | 96,018 | 67,187 | 70.0 | 28,831 | 30.0 | 1,356 | 443 | 32.7 | 913 | 67.3 |
| 1986 | 101,905 | 69,949 | 68.6 | 31,956 | 31.4 | 1,405 | 460 | 32.7 | 945 | 67.3 |
| 1987 | 103,983 | 70,594 | 67.9 | 33,389 | 32.1 | 1,446 | 497 | 34.4 | 949 | 65.6 |
| 1988 | 102,854 | 67,617 | 65.7 | 35,237 | 34.3 | 1,690 | 588 | 34.8 | 1,102 | 65.2 |
| 1989 | 104,065 | 67,365 | 64.7 | 36,700 | 35.3 | 1,928 | 657 | 34.1 | 1,271 | 65.9 |
| 1990 | 107,658 | 69,454 | 64.5 | 38,204 | 35.5 | 1,950 | 613 | 31.4 | 1,337 | 68.6 |
| 1991 | 113,535 | 72,181 | 63.6 | 41,354 | 36.4 | 2,262 | 655 | 29.0 | 1,607 | 71.0 |
| 1992 | 118,039 | 76,569 | 64.9 | 41,470 | 35.1 | 2,369 | 767 | 32.4 | 1,602 | 67.6 |
| 1993 | 116,872 | 77,577 | 66.4 | 39,295 | 33.6 | 2,446 | 843 | 34.5 | 1,603 | 65.5 |
| 1994 | 113,024 | 76,018 | 67.3 | 37,006 | 32.7 | 2,606 | 1,018 | 39.1 | 1,588 | 60.9 |
| 1995 | 107,201 | 71,717 | 66.9 | 35,484 | 33.1 | 2,648 | 999 | 37.7 | 1,649 | 62.3 |
| 1996 | 103,224 | 68,168 | 66.0 | 35,056 | 34.0 | 2,677 | 1,050 | 39.2 | 1,627 | 60.8 |
| 1997 | 101,148 | 64,642 | 63.9 | 36,506 | 36.1 | 2,971 | 1,089 | 36.7 | 1,882 | 63.3 |
| 1998 | 100,038 | 62,249 | 62.2 | 37,789 | 37.8 | 2,853 | 950 | 33.3 | 1,903 | 66.7 |
| 1999 | 101,691 | 60,188 | 59.2 | 41,503 | 40.8 | 3,196 | 1,018 | 31.9 | 2,178 | 68.1 |
| 2000 | 104,112 | 56,651 | 54.4 | 47,461 | 45.6 | 3,313 | 1,069 | 32.3 | 2,244 | 67.7 |
| 2001 | 109,493 | 56,890 | 52.0 | 52,603 | 48.0 | 3,152 | 965 | 30.6 | 2,187 | 69.4 |
| 2002 | 119,668 | 61,277 | 51.2 | 58,391 | 48.8 | 3,566 | 1,117 | 31.3 | 2,449 | 68.7 |
| 2003 | 127,377 | 67,310 | 52.8 | 60,067 | 47.2 | 3,810 | 1,133 | 29.7 | 2,677 | 70.3 |
| 2004 | 123,566 | 66,379 | 53.7 | 57,187 | 46.3 | 3,949 | 1,297 | 32.8 | 2,652 | 67.2 |
| 2005 | 120,565 | 66,551 | 55.2 | 54,014 | 44.8 | 4,166 | 1,413 | 33.9 | 2,753 | 66.1 |
| 2006 | 123,041 | 67,698 | 55.0 | 55,343 | 45.0 | 4,642 | 1,538 | 33.1 | 3,104 | 66.9 |
| 2007old[a] | 130,255 | 70,357 | 54.0 | 59,898 | 46.0 | 4,908 | 1,591 | 32.4 | 3,317 | 67.6 |
| 2007new[a] | 131,676 | 71,299 | 54.1 | 60,377 | 45.9 | 4,942 | 1,594 | 32.3 | 3,348 | 67.7 |
| 2008 | 137,856 | 74,251 | 53.9 | 63,605 | 46.1 | 5,462 | 1,899 | 34.8 | 3,563 | 65.2 |
| 2009 | 144,677 | 78,642 | 54.4 | 66,035 | 45.6 | 6,416 | 2,375 | 37.0 | 4,041 | 63.0 |
| 2010[b,c] | 149,241 | 82,295 | 55.1 | 66,946 | 44.9 | 6,969 | 2,637 | 37.8 | 4,332 | 62.2 |
| 2011[c] | 146,501 | 79,314 | 54.1 | 67,187 | 45.9 | 6,786 | 2,634 | 38.8 | 4,152 | 61.2 |
| 2012 | 148,385 | 77,301 | 52.1 | 71,084 | 47.9 | 7,103 | 2,738 | 38.5 | 4,365 | 61.5 |
| 2013 | 153,049 | 75,662 | 49.4 | 77,387 | 50.6 | 7,106 | 2,706 | 38.1 | 4,400 | 61.9 |
| 2014old[d] | 162,013 | 73,268 | 45.2 | 88,745 | 54.8 | 7,292 | 2,789 | 38.2 | 4,503 | 61.8 |
| 2014new[d] | 164,488 | 74,013 | 45.0 | 90,475 | 55.0 | 7,307 | 2,792 | 38.2 | 4,515 | 61.8 |
| 2015 | 169,354 | 73,452 | 43.4 | 95,902 | 56.6 | 7,656 | 2,521 | 32.9 | 5,135 | 67.1 |
| 2016 | 168,443 | 73,039 | 43.4 | 95,404 | 56.6 | 7,796 | 2,590 | 33.2 | 5,206 | 66.8 |
| 2017old[e] | 166,819 | 76,182 | 45.7 | 90,637 | 54.3 | 7,929 | 2,662 | 33.6 | 5,267 | 66.4 |
| 2017new[e] | 165,581 | 75,160 | 45.4 | 90,421 | 54.6 | 7,839 | 2,650 | 33.8 | 5,189 | 66.2 |
| 2018 | 163,301 | 76,770 | 47.0 | 86,531 | 53.0 | 7,914 | 2,656 | 33.6 | 5,258 | 66.4 |
| 2019 | 164,004 | 79,982 | 48.8 | 84,022 | 51.2 | 8,266 | 2,689 | 32.5 | 5,577 | 67.5 |
| Master's students | | | | | | | | | | |
| 2017new[e] | 96,756 | 46,470 | 48.0 | 50,286 | 52.0 | na | na | na | na | na |
| 2018 | 93,064 | 47,813 | 51.4 | 45,251 | 48.6 | na | na | na | na | na |

TABLE 1-3c

## Citizenship of graduate students and postdoctoral appointees in engineering: 1980–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U.S. citizens and permanent residents | | Temporary visa holders | | | U.S. citizens and permanent residents | | Temporary visa holders | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 2019 | 91,939 | 49,873 | 54.2 | 42,066 | 45.8 | na | na | na | na | na |
| Doctoral students | | | | | | | | | | |
| 2017new[e] | 68,825 | 28,690 | 41.7 | 40,135 | 58.3 | na | na | na | na | na |
| 2018 | 70,237 | 28,957 | 41.2 | 41,280 | 58.8 | na | na | na | na | na |
| 2019 | 72,065 | 30,109 | 41.8 | 41,956 | 58.2 | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017.

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[b] In 2010, the postdoctoral (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[c] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[e] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-3d

## Citizenship of graduate students and postdoctoral appointees in health: 1980–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U.S. citizens and permanent residents | | Temporary visa holders | | | U.S. citizens and permanent residents | | Temporary visa holders | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 1980 | 41,478 | 39,435 | 95.1 | 2,043 | 4.9 | 4,376 | 3,283 | 75.0 | 1,093 | 25.0 |
| 1981 | 43,141 | 40,995 | 95.0 | 2,146 | 5.0 | 4,863 | 3,504 | 72.1 | 1,359 | 27.9 |
| 1982 | 43,425 | 40,405 | 93.0 | 3,020 | 7.0 | 4,685 | 3,413 | 72.8 | 1,272 | 27.2 |
| 1983 | 43,466 | 40,422 | 93.0 | 3,044 | 7.0 | 5,042 | 3,716 | 73.7 | 1,326 | 26.3 |
| 1984 | 45,028 | 42,099 | 93.5 | 2,929 | 6.5 | 5,353 | 3,861 | 72.1 | 1,492 | 27.9 |
| 1985 | 46,030 | 42,880 | 93.2 | 3,150 | 6.8 | 5,455 | 3,785 | 69.4 | 1,670 | 30.6 |
| 1986 | 47,538 | 44,188 | 93.0 | 3,350 | 7.0 | 5,804 | 3,921 | 67.6 | 1,883 | 32.4 |
| 1987 | 48,258 | 44,874 | 93.0 | 3,384 | 7.0 | 6,066 | 3,801 | 62.7 | 2,265 | 37.3 |
| 1988 | 49,360 | 45,717 | 92.6 | 3,643 | 7.4 | 6,409 | 3,976 | 62.0 | 2,433 | 38.0 |
| 1989 | 51,836 | 47,927 | 92.5 | 3,909 | 7.5 | 7,026 | 4,178 | 59.5 | 2,848 | 40.5 |
| 1990 | 55,072 | 50,801 | 92.2 | 4,271 | 7.8 | 7,762 | 4,446 | 57.3 | 3,316 | 42.7 |
| 1991 | 58,620 | 54,041 | 92.2 | 4,579 | 7.8 | 8,008 | 4,328 | 54.0 | 3,680 | 46.0 |
| 1992 | 63,005 | 58,522 | 92.9 | 4,483 | 7.1 | 8,864 | 4,616 | 52.1 | 4,248 | 47.9 |
| 1993 | 68,581 | 63,928 | 93.2 | 4,653 | 6.8 | 9,657 | 5,092 | 52.7 | 4,565 | 47.3 |
| 1994 | 73,257 | 68,826 | 94.0 | 4,431 | 6.0 | 10,590 | 5,517 | 52.1 | 5,073 | 47.9 |
| 1995 | 77,174 | 72,793 | 94.3 | 4,381 | 5.7 | 9,766 | 5,319 | 54.5 | 4,447 | 45.5 |
| 1996 | 78,898 | 74,020 | 93.8 | 4,878 | 6.2 | 10,538 | 5,482 | 52.0 | 5,056 | 48.0 |
| 1997 | 79,578 | 74,659 | 93.8 | 4,919 | 6.2 | 11,217 | 6,081 | 54.2 | 5,136 | 45.8 |
| 1998 | 80,771 | 75,681 | 93.7 | 5,090 | 6.3 | 12,210 | 6,744 | 55.2 | 5,466 | 44.8 |
| 1999 | 82,074 | 76,548 | 93.3 | 5,526 | 6.7 | 11,820 | 6,159 | 52.1 | 5,661 | 47.9 |
| 2000 | 79,775 | 74,243 | 93.1 | 5,532 | 6.9 | 12,891 | 6,825 | 52.9 | 6,066 | 47.1 |
| 2001 | 80,378 | 74,129 | 92.2 | 6,249 | 7.8 | 13,115 | 6,306 | 48.1 | 6,809 | 51.9 |
| 2002 | 85,570 | 78,297 | 91.5 | 7,273 | 8.5 | 13,097 | 6,139 | 46.9 | 6,958 | 53.1 |
| 2003 | 92,476 | 84,924 | 91.8 | 7,552 | 8.2 | 13,062 | 6,121 | 46.9 | 6,941 | 53.1 |
| 2004 | 98,590 | 91,196 | 92.5 | 7,394 | 7.5 | 13,175 | 6,187 | 47.0 | 6,988 | 53.0 |
| 2005 | 103,951 | 96,217 | 92.6 | 7,734 | 7.4 | 14,099 | 7,429 | 52.7 | 6,670 | 47.3 |
| 2006 | 111,356 | 103,022 | 92.5 | 8,334 | 7.5 | 14,456 | 7,036 | 48.7 | 7,420 | 51.3 |
| 2007old[a] | 105,448 | 97,109 | 92.1 | 8,339 | 7.9 | 14,818 | 7,119 | 48.0 | 7,699 | 52.0 |
| 2007new[a] | 103,300 | 95,203 | 92.2 | 8,097 | 7.8 | 14,617 | 6,996 | 47.9 | 7,621 | 52.1 |
| 2008 | 102,214 | 93,669 | 91.6 | 8,545 | 8.4 | 15,961 | 8,641 | 54.1 | 7,320 | 45.9 |
| 2009 | 85,960 | 77,306 | 89.9 | 8,654 | 10.1 | 17,001 | 8,930 | 52.5 | 8,071 | 47.5 |
| 2010[b,c] | 76,120 | 68,089 | 89.4 | 8,031 | 10.6 | 19,119 | 9,725 | 50.9 | 9,394 | 49.1 |
| 2011[c] | 65,879 | 58,363 | 88.6 | 7,516 | 11.4 | 18,518 | 9,372 | 50.6 | 9,146 | 49.4 |
| 2012 | 65,825 | 58,354 | 88.7 | 7,471 | 11.3 | 19,010 | 9,650 | 50.8 | 9,360 | 49.2 |
| 2013 | 62,710 | 55,071 | 87.8 | 7,639 | 12.2 | 18,547 | 9,289 | 50.1 | 9,258 | 49.9 |
| 2014old[d] | 63,577 | 55,755 | 87.7 | 7,822 | 12.3 | 18,903 | 9,612 | 50.8 | 9,291 | 49.2 |
| 2014new[d] | 64,703 | 56,797 | 87.8 | 7,906 | 12.2 | 18,970 | 9,642 | 50.8 | 9,328 | 49.2 |
| 2015 | 67,389 | 59,322 | 88.0 | 8,067 | 12.0 | 18,566 | 9,133 | 49.2 | 9,433 | 50.8 |
| 2016 | 64,336 | 56,390 | 87.6 | 7,946 | 12.4 | 18,975 | 9,605 | 50.6 | 9,370 | 49.4 |
| 2017old[e] | 66,934 | 59,521 | 88.9 | 7,413 | 11.1 | 19,143 | 9,732 | 50.8 | 9,411 | 49.2 |
| 2017new[e] | 67,963 | 60,264 | 88.7 | 7,699 | 11.3 | 18,653 | 9,467 | 50.8 | 9,186 | 49.2 |
| 2018 | 72,751 | 64,534 | 88.7 | 8,217 | 11.3 | 19,305 | 9,519 | 49.3 | 9,786 | 50.7 |
| 2019 | 72,422 | 64,154 | 88.6 | 8,268 | 11.4 | 19,478 | 9,419 | 48.4 | 10,059 | 51.6 |
| Master's students | | | | | | | | | | |
| 2017new[e] | 52,662 | 48,595 | 92.3 | 4,067 | 7.7 | na | na | na | na | na |
| 2018 | 56,820 | 52,428 | 92.3 | 4,392 | 7.7 | na | na | na | na | na |

TABLE 1-3d

## Citizenship of graduate students and postdoctoral appointees in health: 1980–2019

(Number and percent)

| | Graduate students | | | | | Postdoctoral appointees | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U.S. citizens and permanent residents | | Temporary visa holders | | | U.S. citizens and permanent residents | | Temporary visa holders | |
| Year | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 2019 | 56,494 | 52,119 | 92.3 | 4,375 | 7.7 | na | na | na | na | na |
| Doctoral students | | | | | | | | | | |
| 2017new[e] | 15,301 | 11,669 | 76.3 | 3,632 | 23.7 | na | na | na | na | na |
| 2018 | 15,931 | 12,106 | 76.0 | 3,825 | 24.0 | na | na | na | na | na |
| 2019 | 15,928 | 12,035 | 75.6 | 3,893 | 24.4 | na | na | na | na | na |

na = not applicable; master's and doctoral students were not reported separately until 2017.

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[b] In 2010, the postdoctoral (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[c] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[e] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-4a

## Ethnicity and race of U.S. citizen and permanent resident graduate students in science, engineering, and health: 2000–2019

(Number and percent)

| | | U.S. citizens and permanent residents | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Not Hispanic or Latino | | | | | | | | | | | | | |
| | | Hispanic or Latino | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | Unknown ethnicity and race | |
| Year | Total | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 2000 | 364,894 | 21,327 | 5.8 | 2,021 | 0.6 | 28,568 | 7.8 | 25,928 | 7.1 | 1,622 | 0.4 | 261,112 | 71.6 | 520 | 0.1 | 23,796 | 6.5 |
| 2001 | 368,737 | 22,329 | 6.1 | 2,136 | 0.6 | 30,528 | 8.3 | 27,071 | 7.3 | 1,417 | 0.4 | 260,371 | 70.6 | 551 | 0.1 | 24,334 | 6.6 |
| 2002 | 387,416 | 24,282 | 6.3 | 2,239 | 0.6 | 33,625 | 8.7 | 28,715 | 7.4 | 1,293 | 0.3 | 270,025 | 69.7 | 467 | 0.1 | 26,770 | 6.9 |
| 2003 | 412,105 | 26,684 | 6.5 | 2,399 | 0.6 | 36,756 | 8.9 | 31,242 | 7.6 | 1,399 | 0.3 | 283,241 | 68.7 | 493 | 0.1 | 29,891 | 7.3 |
| 2004 | 423,218 | 28,031 | 6.6 | 2,354 | 0.6 | 36,084 | 8.5 | 32,496 | 7.7 | 1,651 | 0.4 | 288,574 | 68.2 | 569 | 0.1 | 33,459 | 7.9 |
| 2005 | 434,730 | 29,309 | 6.7 | 2,485 | 0.6 | 36,432 | 8.4 | 33,547 | 7.7 | 1,332 | 0.3 | 292,276 | 67.2 | 629 | 0.1 | 38,720 | 8.9 |
| 2006 | 446,625 | 30,510 | 6.8 | 2,689 | 0.6 | 36,635 | 8.2 | 34,866 | 7.8 | 1,228 | 0.3 | 299,275 | 67.0 | 608 | 0.1 | 40,814 | 9.1 |
| 2007old[a] | 450,251 | 31,110 | 6.9 | 2,777 | 0.6 | 36,924 | 8.2 | 34,934 | 7.8 | 1,472 | 0.3 | 298,917 | 66.4 | 662 | 0.1 | 43,455 | 9.7 |
| 2007new[a] | 460,294 | 31,700 | 6.9 | 2,862 | 0.6 | 37,297 | 8.1 | 35,923 | 7.8 | 1,485 | 0.3 | 306,001 | 66.5 | 667 | 0.1 | 44,359 | 9.6 |
| 2008 | 463,450 | 31,648 | 6.8 | 3,286 | 0.7 | 36,579 | 7.9 | 37,047 | 8.0 | 1,426 | 0.3 | 306,989 | 66.2 | 1,556 | 0.3 | 44,919 | 9.7 |
| 2009 | 459,648 | 32,336 | 7.0 | 3,042 | 0.7 | 37,310 | 8.1 | 37,349 | 8.1 | 1,350 | 0.3 | 302,677 | 65.8 | 2,645 | 0.6 | 42,939 | 9.3 |
| 2010 | 458,492 | 33,375 | 7.3 | 2,884 | 0.6 | 37,228 | 8.1 | 38,199 | 8.3 | 1,354 | 0.3 | 299,993 | 65.4 | 5,816 | 1.3 | 39,643 | 8.6 |
| 2011 | 450,523 | 35,028 | 7.8 | 2,741 | 0.6 | 37,516 | 8.3 | 38,902 | 8.6 | 1,318 | 0.3 | 293,640 | 65.2 | 6,899 | 1.5 | 34,479 | 7.7 |
| 2012 | 443,697 | 35,858 | 8.1 | 2,507 | 0.6 | 37,119 | 8.4 | 38,340 | 8.6 | 1,176 | 0.3 | 287,786 | 64.9 | 8,714 | 2.0 | 32,197 | 7.3 |
| 2013 | 436,296 | 37,283 | 8.5 | 2,517 | 0.6 | 37,137 | 8.5 | 37,197 | 8.5 | 1,037 | 0.2 | 281,354 | 64.5 | 9,160 | 2.1 | 30,611 | 7.0 |
| 2014old[b] | 429,133 | 37,746 | 8.8 | 2,320 | 0.5 | 37,453 | 8.7 | 36,113 | 8.4 | 997 | 0.2 | 275,389 | 64.2 | 10,440 | 2.4 | 28,675 | 6.7 |
| 2014new[b] | 439,309 | 39,881 | 9.1 | 2,385 | 0.5 | 38,264 | 8.7 | 36,280 | 8.3 | 1,022 | 0.2 | 281,285 | 64.0 | 10,649 | 2.4 | 29,543 | 6.7 |
| 2015 | 441,956 | 43,177 | 9.8 | 2,306 | 0.5 | 39,810 | 9.0 | 37,245 | 8.4 | 1,048 | 0.2 | 278,364 | 63.0 | 11,521 | 2.6 | 28,485 | 6.4 |
| 2016 | 436,139 | 45,171 | 10.4 | 2,147 | 0.5 | 40,500 | 9.3 | 36,634 | 8.4 | 991 | 0.2 | 272,317 | 62.4 | 12,023 | 2.8 | 26,356 | 6.0 |
| 2017old[c] | 446,676 | 48,491 | 10.9 | 2,065 | 0.5 | 43,385 | 9.7 | 37,853 | 8.5 | 825 | 0.2 | 274,128 | 61.4 | 14,376 | 3.2 | 25,553 | 5.7 |
| 2017new[c] | 416,481 | 44,621 | 10.7 | 1,850 | 0.4 | 42,045 | 10.1 | 32,749 | 7.9 | 703 | 0.2 | 257,302 | 61.8 | 13,539 | 3.3 | 23,672 | 5.7 |
| 2018 | 438,581 | 49,084 | 11.2 | 1,932 | 0.4 | 45,307 | 10.3 | 35,943 | 8.2 | 730 | 0.2 | 265,735 | 60.6 | 14,864 | 3.4 | 24,986 | 5.7 |
| 2019 | 456,504 | 54,467 | 11.9 | 2,077 | 0.5 | 48,844 | 10.7 | 38,048 | 8.3 | 744 | 0.2 | 272,545 | 59.7 | 15,613 | 3.4 | 24,166 | 5.3 |
| Master's students | | | | | | | | | | | | | | | | | |
| 2017new[c] | 251,896 | 29,622 | 11.8 | 1,136 | 0.5 | 26,093 | 10.4 | 23,266 | 9.2 | 468 | 0.2 | 148,031 | 58.8 | 8,119 | 3.2 | 15,161 | 6.0 |
| 2018 | 271,290 | 32,923 | 12.1 | 1,219 | 0.4 | 28,557 | 10.5 | 25,878 | 9.5 | 497 | 0.2 | 156,010 | 57.5 | 9,120 | 3.4 | 17,086 | 6.3 |
| 2019 | 287,370 | 36,777 | 12.8 | 1,327 | 0.5 | 31,301 | 10.9 | 27,598 | 9.6 | 542 | 0.2 | 163,836 | 57.0 | 9,593 | 3.3 | 16,396 | 5.7 |
| Doctoral students | | | | | | | | | | | | | | | | | |
| 2017new[c] | 164,585 | 14,999 | 9.1 | 714 | 0.4 | 15,952 | 9.7 | 9,483 | 5.8 | 235 | 0.1 | 109,271 | 66.4 | 5,420 | 3.3 | 8,511 | 5.2 |
| 2018 | 167,291 | 16,161 | 9.7 | 713 | 0.4 | 16,750 | 10.0 | 10,065 | 6.0 | 233 | 0.1 | 109,725 | 65.6 | 5,744 | 3.4 | 7,900 | 4.7 |
| 2019 | 169,134 | 17,690 | 10.5 | 750 | 0.4 | 17,543 | 10.4 | 10,450 | 6.2 | 202 | 0.1 | 108,709 | 64.3 | 6,020 | 3.6 | 7,770 | 4.6 |

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.
[b] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.
[c] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**
Percentages may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017. Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-4b

## Ethnicity and race of U.S. citizen and permanent resident graduate students in science: 2000–2019

(Number and percent)

| Year | Total | U.S. citizens and permanent residents | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Not Hispanic or Latino | | | | | | | | | | | | | |
| | | Hispanic or Latino | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | Unknown ethnicity and race | |
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 2000 | 234,000 | 14,185 | 6.1 | 1,394 | 0.6 | 16,839 | 7.2 | 17,857 | 7.6 | 945 | 0.4 | 166,486 | 71.1 | 399 | 0.2 | 15,895 | 6.8 |
| 2001 | 237,718 | 14,791 | 6.2 | 1,456 | 0.6 | 17,698 | 7.4 | 18,540 | 7.8 | 870 | 0.4 | 167,559 | 70.5 | 429 | 0.2 | 16,375 | 6.9 |
| 2002 | 247,842 | 16,173 | 6.5 | 1,490 | 0.6 | 19,160 | 7.7 | 19,594 | 7.9 | 770 | 0.3 | 172,576 | 69.6 | 330 | 0.1 | 17,749 | 7.2 |
| 2003 | 259,871 | 17,262 | 6.6 | 1,575 | 0.6 | 20,280 | 7.8 | 20,962 | 8.1 | 819 | 0.3 | 179,205 | 69.0 | 357 | 0.1 | 19,411 | 7.5 |
| 2004 | 265,643 | 18,048 | 6.8 | 1,575 | 0.6 | 20,007 | 7.5 | 21,225 | 8.0 | 926 | 0.3 | 181,615 | 68.4 | 437 | 0.2 | 21,810 | 8.2 |
| 2005 | 271,962 | 19,297 | 7.1 | 1,685 | 0.6 | 19,952 | 7.3 | 21,778 | 8.0 | 892 | 0.3 | 182,908 | 67.3 | 454 | 0.2 | 24,996 | 9.2 |
| 2006 | 275,905 | 19,759 | 7.2 | 1,822 | 0.7 | 20,182 | 7.3 | 22,092 | 8.0 | 818 | 0.3 | 184,700 | 66.9 | 448 | 0.2 | 26,084 | 9.5 |
| 2007old[a] | 282,785 | 20,515 | 7.3 | 1,882 | 0.7 | 20,818 | 7.4 | 22,881 | 8.1 | 946 | 0.3 | 187,292 | 66.2 | 457 | 0.2 | 27,994 | 9.9 |
| 2007new[a] | 293,792 | 21,176 | 7.2 | 1,972 | 0.7 | 21,261 | 7.2 | 23,862 | 8.1 | 998 | 0.3 | 194,875 | 66.3 | 464 | 0.2 | 29,184 | 9.9 |
| 2008 | 295,530 | 21,382 | 7.2 | 2,272 | 0.8 | 20,808 | 7.0 | 24,694 | 8.4 | 965 | 0.3 | 195,037 | 66.0 | 1,147 | 0.4 | 29,225 | 9.9 |
| 2009 | 303,700 | 22,047 | 7.3 | 2,205 | 0.7 | 21,976 | 7.2 | 25,801 | 8.5 | 976 | 0.3 | 200,047 | 65.9 | 1,950 | 0.6 | 28,698 | 9.4 |
| 2010 | 308,108 | 22,969 | 7.5 | 2,171 | 0.7 | 21,915 | 7.1 | 26,914 | 8.7 | 914 | 0.3 | 202,386 | 65.7 | 3,987 | 1.3 | 26,852 | 8.7 |
| 2011 | 312,846 | 24,889 | 8.0 | 2,075 | 0.7 | 23,000 | 7.4 | 28,129 | 9.0 | 842 | 0.3 | 205,437 | 65.7 | 4,865 | 1.6 | 23,609 | 7.5 |
| 2012 | 308,042 | 25,371 | 8.2 | 1,910 | 0.6 | 22,878 | 7.4 | 27,414 | 8.9 | 781 | 0.3 | 201,326 | 65.4 | 6,071 | 2.0 | 22,291 | 7.2 |
| 2013 | 305,563 | 26,585 | 8.7 | 1,939 | 0.6 | 23,108 | 7.6 | 27,199 | 8.9 | 752 | 0.2 | 198,105 | 64.8 | 6,575 | 2.2 | 21,300 | 7.0 |
| 2014old[b] | 300,110 | 26,941 | 9.0 | 1,763 | 0.6 | 23,335 | 7.8 | 26,083 | 8.7 | 758 | 0.3 | 193,589 | 64.5 | 7,512 | 2.5 | 20,129 | 6.7 |
| 2014new[b] | 308,499 | 28,605 | 9.3 | 1,826 | 0.6 | 24,039 | 7.8 | 26,768 | 8.7 | 784 | 0.3 | 198,185 | 64.2 | 7,697 | 2.5 | 20,595 | 6.7 |
| 2015 | 309,182 | 30,891 | 10.0 | 1,742 | 0.6 | 25,044 | 8.1 | 27,019 | 8.7 | 789 | 0.3 | 195,761 | 63.3 | 8,285 | 2.7 | 19,651 | 6.4 |
| 2016 | 306,710 | 32,616 | 10.6 | 1,615 | 0.5 | 25,772 | 8.4 | 26,890 | 8.8 | 747 | 0.2 | 191,941 | 62.6 | 8,690 | 2.8 | 18,439 | 6.0 |
| 2017old[c] | 310,973 | 34,199 | 11.0 | 1,559 | 0.5 | 27,541 | 8.9 | 27,550 | 8.9 | 621 | 0.2 | 191,298 | 61.5 | 10,280 | 3.3 | 17,925 | 5.8 |
| 2017new[c] | 281,057 | 30,383 | 10.8 | 1,347 | 0.5 | 26,028 | 9.3 | 22,557 | 8.0 | 487 | 0.2 | 174,801 | 62.2 | 9,434 | 3.4 | 16,020 | 5.7 |
| 2018 | 297,277 | 33,894 | 11.4 | 1,403 | 0.5 | 28,425 | 9.6 | 24,844 | 8.4 | 531 | 0.2 | 180,735 | 60.8 | 10,346 | 3.5 | 17,099 | 5.8 |
| 2019 | 312,368 | 38,193 | 12.2 | 1,526 | 0.5 | 31,482 | 10.1 | 26,450 | 8.5 | 542 | 0.2 | 186,405 | 59.7 | 10,902 | 3.5 | 16,868 | 5.4 |
| Master's students | | | | | | | | | | | | | | | | | |
| 2017new[c] | 156,831 | 18,728 | 11.9 | 777 | 0.5 | 15,084 | 9.6 | 15,639 | 10.0 | 305 | 0.2 | 91,511 | 58.4 | 5,202 | 3.3 | 9,585 | 6.1 |
| 2018 | 171,049 | 21,203 | 12.4 | 823 | 0.5 | 16,933 | 9.9 | 17,560 | 10.3 | 350 | 0.2 | 97,081 | 56.8 | 5,915 | 3.5 | 11,184 | 6.5 |
| 2019 | 185,378 | 24,330 | 13.1 | 902 | 0.5 | 19,529 | 10.5 | 18,996 | 10.2 | 382 | 0.2 | 103,762 | 56.0 | 6,339 | 3.4 | 11,138 | 6.0 |
| Doctoral students | | | | | | | | | | | | | | | | | |
| 2017new[c] | 124,226 | 11,655 | 9.4 | 570 | 0.5 | 10,944 | 8.8 | 6,918 | 5.6 | 182 | 0.1 | 83,290 | 67.0 | 4,232 | 3.4 | 6,435 | 5.2 |
| 2018 | 126,228 | 12,691 | 10.1 | 580 | 0.5 | 11,492 | 9.1 | 7,284 | 5.8 | 181 | 0.1 | 83,654 | 66.3 | 4,431 | 3.5 | 5,915 | 4.7 |
| 2019 | 126,990 | 13,863 | 10.9 | 624 | 0.5 | 11,953 | 9.4 | 7,454 | 5.9 | 160 | 0.1 | 82,643 | 65.1 | 4,563 | 3.6 | 5,730 | 4.5 |

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.
[b] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.
[c] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**
Percentages may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017. Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-4c

## Ethnicity and race of U.S. citizen and permanent resident graduate students in engineering: 2000–2019

(Number and percent)

| | | U.S. citizens and permanent residents | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Not Hispanic or Latino | | | | | | | | | | | | | |
| | | Hispanic or Latino | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | Unknown ethnicity and race | |
| Year | Total | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 2000 | 56,651 | 3,018 | 5.3 | 208 | 0.4 | 6,909 | 12.2 | 2,977 | 5.3 | 305 | 0.5 | 39,083 | 69.0 | 40 | 0.1 | 4,111 | 7.3 |
| 2001 | 56,890 | 3,183 | 5.6 | 227 | 0.4 | 7,769 | 13.7 | 2,915 | 5.1 | 157 | 0.3 | 38,459 | 67.6 | 35 | 0.1 | 4,145 | 7.3 |
| 2002 | 61,277 | 3,461 | 5.6 | 244 | 0.4 | 9,130 | 14.9 | 3,074 | 5.0 | 169 | 0.3 | 40,559 | 66.2 | 54 | 0.1 | 4,586 | 7.5 |
| 2003 | 67,310 | 3,979 | 5.9 | 304 | 0.5 | 10,466 | 15.5 | 3,212 | 4.8 | 221 | 0.3 | 43,469 | 64.6 | 66 | 0.1 | 5,593 | 8.3 |
| 2004 | 66,379 | 4,164 | 6.3 | 273 | 0.4 | 9,563 | 14.4 | 3,399 | 5.1 | 149 | 0.2 | 43,235 | 65.1 | 56 | 0.1 | 5,540 | 8.3 |
| 2005 | 66,551 | 4,090 | 6.1 | 273 | 0.4 | 9,595 | 14.4 | 3,470 | 5.2 | 135 | 0.2 | 42,868 | 64.4 | 74 | 0.1 | 6,046 | 9.1 |
| 2006 | 67,698 | 4,381 | 6.5 | 290 | 0.4 | 9,050 | 13.4 | 3,572 | 5.3 | 129 | 0.2 | 43,293 | 64.0 | 53 | 0.1 | 6,930 | 10.2 |
| 2007old[a] | 70,357 | 4,517 | 6.4 | 286 | 0.4 | 9,316 | 13.2 | 3,684 | 5.2 | 199 | 0.3 | 44,751 | 63.6 | 86 | 0.1 | 7,518 | 10.7 |
| 2007new[a] | 71,299 | 4,563 | 6.4 | 290 | 0.4 | 9,436 | 13.2 | 3,775 | 5.3 | 202 | 0.3 | 45,329 | 63.6 | 87 | 0.1 | 7,617 | 10.7 |
| 2008 | 74,251 | 4,716 | 6.4 | 346 | 0.5 | 9,548 | 12.9 | 3,986 | 5.4 | 156 | 0.2 | 47,586 | 64.1 | 172 | 0.2 | 7,741 | 10.4 |
| 2009 | 78,642 | 5,218 | 6.6 | 344 | 0.4 | 9,778 | 12.4 | 4,172 | 5.3 | 149 | 0.2 | 50,396 | 64.1 | 350 | 0.4 | 8,235 | 10.5 |
| 2010 | 82,295 | 5,640 | 6.9 | 329 | 0.4 | 10,270 | 12.5 | 4,180 | 5.1 | 174 | 0.2 | 52,870 | 64.2 | 1,002 | 1.2 | 7,830 | 9.5 |
| 2011 | 79,314 | 5,919 | 7.5 | 317 | 0.4 | 10,147 | 12.8 | 4,068 | 5.1 | 166 | 0.2 | 50,659 | 63.9 | 1,238 | 1.6 | 6,800 | 8.6 |
| 2012 | 77,301 | 6,035 | 7.8 | 278 | 0.4 | 9,822 | 12.7 | 3,924 | 5.1 | 139 | 0.2 | 49,457 | 64.0 | 1,507 | 1.9 | 6,139 | 7.9 |
| 2013 | 75,662 | 6,234 | 8.2 | 259 | 0.3 | 9,809 | 13.0 | 3,712 | 4.9 | 130 | 0.2 | 48,413 | 64.0 | 1,440 | 1.9 | 5,665 | 7.5 |
| 2014old[b] | 73,268 | 6,205 | 8.5 | 285 | 0.4 | 9,646 | 13.2 | 3,631 | 5.0 | 118 | 0.2 | 46,706 | 63.7 | 1,624 | 2.2 | 5,053 | 6.9 |
| 2014new[b] | 74,013 | 6,527 | 8.8 | 286 | 0.4 | 9,706 | 13.1 | 3,714 | 5.0 | 118 | 0.2 | 46,918 | 63.4 | 1,638 | 2.2 | 5,106 | 6.9 |
| 2015 | 73,452 | 6,916 | 9.4 | 270 | 0.4 | 9,718 | 13.2 | 3,769 | 5.1 | 146 | 0.2 | 45,888 | 62.5 | 1,745 | 2.4 | 5,000 | 6.8 |
| 2016 | 73,039 | 6,962 | 9.5 | 245 | 0.3 | 9,902 | 13.6 | 3,710 | 5.1 | 115 | 0.2 | 45,622 | 62.5 | 1,824 | 2.5 | 4,659 | 6.4 |
| 2017old[c] | 76,182 | 7,664 | 10.1 | 222 | 0.3 | 10,531 | 13.8 | 3,941 | 5.2 | 84 | 0.1 | 47,289 | 62.1 | 2,304 | 3.0 | 4,147 | 5.4 |
| 2017new[c] | 75,160 | 7,537 | 10.0 | 208 | 0.3 | 10,483 | 13.9 | 3,842 | 5.1 | 86 | 0.1 | 46,637 | 62.1 | 2,265 | 3.0 | 4,102 | 5.5 |
| 2018 | 76,770 | 7,939 | 10.3 | 211 | 0.3 | 10,863 | 14.2 | 4,035 | 5.3 | 75 | 0.1 | 47,447 | 61.8 | 2,460 | 3.2 | 3,740 | 4.9 |
| 2019 | 79,982 | 8,643 | 10.8 | 242 | 0.3 | 11,390 | 14.2 | 4,220 | 5.3 | 95 | 0.1 | 48,892 | 61.1 | 2,773 | 3.5 | 3,727 | 4.7 |
| Master's students | | | | | | | | | | | | | | | | | |
| 2017new[c] | 46,470 | 5,130 | 11.0 | 134 | 0.3 | 6,416 | 13.8 | 2,505 | 5.4 | 56 | 0.1 | 28,281 | 60.9 | 1,422 | 3.1 | 2,526 | 5.4 |
| 2018 | 47,813 | 5,436 | 11.4 | 140 | 0.3 | 6,758 | 14.1 | 2,618 | 5.5 | 45 | 0.1 | 28,993 | 60.6 | 1,519 | 3.2 | 2,304 | 4.8 |
| 2019 | 49,873 | 5,846 | 11.7 | 168 | 0.3 | 7,009 | 14.1 | 2,708 | 5.4 | 69 | 0.1 | 30,121 | 60.4 | 1,672 | 3.4 | 2,280 | 4.6 |
| Doctoral students | | | | | | | | | | | | | | | | | |
| 2017new[c] | 28,690 | 2,407 | 8.4 | 74 | 0.3 | 4,067 | 14.2 | 1,337 | 4.7 | 30 | 0.1 | 18,356 | 64.0 | 843 | 2.9 | 1,576 | 5.5 |
| 2018 | 28,957 | 2,503 | 8.6 | 71 | 0.2 | 4,105 | 14.2 | 1,417 | 4.9 | 30 | 0.1 | 18,454 | 63.7 | 941 | 3.2 | 1,436 | 5.0 |
| 2019 | 30,109 | 2,797 | 9.3 | 74 | 0.2 | 4,381 | 14.6 | 1,512 | 5.0 | 26 | 0.1 | 18,771 | 62.3 | 1,101 | 3.7 | 1,447 | 4.8 |

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.
[b] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.
[c] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**
Percentages may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017. Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-4d

## Ethnicity and race of U.S. citizen and permanent resident graduate students in health: 2000–2019

(Number and percent)

| | | U.S. citizens and permanent residents | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Not Hispanic or Latino | | | | | | | | | | | | | |
| | | Hispanic or Latino | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | Unknown ethnicity and race | |
| Year | Total | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 2000 | 74,243 | 4,124 | 5.6 | 419 | 0.6 | 4,820 | 6.5 | 5,094 | 6.9 | 372 | 0.5 | 55,543 | 74.8 | 81 | 0.1 | 3,790 | 5.1 |
| 2001 | 74,129 | 4,355 | 5.9 | 453 | 0.6 | 5,061 | 6.8 | 5,616 | 7.6 | 390 | 0.5 | 54,353 | 73.3 | 87 | 0.1 | 3,814 | 5.1 |
| 2002 | 78,297 | 4,648 | 5.9 | 505 | 0.6 | 5,335 | 6.8 | 6,047 | 7.7 | 354 | 0.5 | 56,890 | 72.7 | 83 | 0.1 | 4,435 | 5.7 |
| 2003 | 84,924 | 5,443 | 6.4 | 520 | 0.6 | 6,010 | 7.1 | 7,068 | 8.3 | 359 | 0.4 | 60,567 | 71.3 | 70 | 0.1 | 4,887 | 5.8 |
| 2004 | 91,196 | 5,819 | 6.4 | 506 | 0.6 | 6,514 | 7.1 | 7,872 | 8.6 | 576 | 0.6 | 63,724 | 69.9 | 76 | 0.1 | 6,109 | 6.7 |
| 2005 | 96,217 | 5,922 | 6.2 | 527 | 0.5 | 6,885 | 7.2 | 8,299 | 8.6 | 305 | 0.3 | 66,500 | 69.1 | 101 | 0.1 | 7,678 | 8.0 |
| 2006 | 103,022 | 6,370 | 6.2 | 577 | 0.6 | 7,403 | 7.2 | 9,202 | 8.9 | 281 | 0.3 | 71,282 | 69.2 | 107 | 0.1 | 7,800 | 7.6 |
| 2007old[a] | 97,109 | 6,078 | 6.3 | 609 | 0.6 | 6,790 | 7.0 | 8,369 | 8.6 | 327 | 0.3 | 66,874 | 68.9 | 119 | 0.1 | 7,943 | 8.2 |
| 2007new[a] | 95,203 | 5,961 | 6.3 | 600 | 0.6 | 6,600 | 6.9 | 8,286 | 8.7 | 285 | 0.3 | 65,797 | 69.1 | 116 | 0.1 | 7,558 | 7.9 |
| 2008 | 93,669 | 5,550 | 5.9 | 668 | 0.7 | 6,223 | 6.6 | 8,367 | 8.9 | 305 | 0.3 | 64,366 | 68.7 | 237 | 0.3 | 7,953 | 8.5 |
| 2009 | 77,306 | 5,071 | 6.6 | 493 | 0.6 | 5,556 | 7.2 | 7,376 | 9.5 | 225 | 0.3 | 52,234 | 67.6 | 345 | 0.4 | 6,006 | 7.8 |
| 2010 | 68,089 | 4,766 | 7.0 | 384 | 0.6 | 5,043 | 7.4 | 7,105 | 10.4 | 266 | 0.4 | 44,737 | 65.7 | 827 | 1.2 | 4,961 | 7.3 |
| 2011 | 58,363 | 4,220 | 7.2 | 349 | 0.6 | 4,369 | 7.5 | 6,705 | 11.5 | 310 | 0.5 | 37,544 | 64.3 | 796 | 1.4 | 4,070 | 7.0 |
| 2012 | 58,354 | 4,452 | 7.6 | 319 | 0.5 | 4,419 | 7.6 | 7,002 | 12.0 | 256 | 0.4 | 37,003 | 63.4 | 1,136 | 1.9 | 3,767 | 6.5 |
| 2013 | 55,071 | 4,464 | 8.1 | 319 | 0.6 | 4,220 | 7.7 | 6,286 | 11.4 | 155 | 0.3 | 34,836 | 63.3 | 1,145 | 2.1 | 3,646 | 6.6 |
| 2014old[b] | 55,755 | 4,600 | 8.3 | 272 | 0.5 | 4,472 | 8.0 | 6,399 | 11.5 | 121 | 0.2 | 35,094 | 62.9 | 1,304 | 2.3 | 3,493 | 6.3 |
| 2014new[b] | 56,797 | 4,749 | 8.4 | 273 | 0.5 | 4,519 | 8.0 | 5,798 | 10.2 | 120 | 0.2 | 36,182 | 63.7 | 1,314 | 2.3 | 3,842 | 6.8 |
| 2015 | 59,322 | 5,370 | 9.1 | 294 | 0.5 | 5,048 | 8.5 | 6,457 | 10.9 | 113 | 0.2 | 36,715 | 61.9 | 1,491 | 2.5 | 3,834 | 6.5 |
| 2016 | 56,390 | 5,593 | 9.9 | 287 | 0.5 | 4,826 | 8.6 | 6,034 | 10.7 | 129 | 0.2 | 34,754 | 61.6 | 1,509 | 2.7 | 3,258 | 5.8 |
| 2017old[c] | 59,521 | 6,628 | 11.1 | 284 | 0.5 | 5,313 | 8.9 | 6,362 | 10.7 | 120 | 0.2 | 35,541 | 59.7 | 1,792 | 3.0 | 3,481 | 5.8 |
| 2017new[c] | 60,264 | 6,701 | 11.1 | 295 | 0.5 | 5,534 | 9.2 | 6,350 | 10.5 | 130 | 0.2 | 35,864 | 59.5 | 1,840 | 3.1 | 3,550 | 5.9 |
| 2018 | 64,534 | 7,251 | 11.2 | 318 | 0.5 | 6,019 | 9.3 | 7,064 | 10.9 | 124 | 0.2 | 37,553 | 58.2 | 2,058 | 3.2 | 4,147 | 6.4 |
| 2019 | 64,154 | 7,631 | 11.9 | 309 | 0.5 | 5,972 | 9.3 | 7,378 | 11.5 | 107 | 0.2 | 37,248 | 58.1 | 1,938 | 3.0 | 3,571 | 5.6 |
| Master's students | | | | | | | | | | | | | | | | | |
| 2017new[c] | 48,595 | 5,764 | 11.9 | 225 | 0.5 | 4,593 | 9.5 | 5,122 | 10.5 | 107 | 0.2 | 28,239 | 58.1 | 1,495 | 3.1 | 3,050 | 6.3 |
| 2018 | 52,428 | 6,284 | 12.0 | 256 | 0.5 | 4,866 | 9.3 | 5,700 | 10.9 | 102 | 0.2 | 29,936 | 57.1 | 1,686 | 3.2 | 3,598 | 6.9 |
| 2019 | 52,119 | 6,601 | 12.7 | 257 | 0.5 | 4,763 | 9.1 | 5,894 | 11.3 | 91 | 0.2 | 29,953 | 57.5 | 1,582 | 3.0 | 2,978 | 5.7 |
| Doctoral students | | | | | | | | | | | | | | | | | |
| 2017new[c] | 11,669 | 937 | 8.0 | 70 | 0.6 | 941 | 8.1 | 1,228 | 10.5 | 23 | 0.2 | 7,625 | 65.3 | 345 | 3.0 | 500 | 4.3 |
| 2018 | 12,106 | 967 | 8.0 | 62 | 0.5 | 1,153 | 9.5 | 1,364 | 11.3 | 22 | 0.2 | 7,617 | 62.9 | 372 | 3.1 | 549 | 4.5 |
| 2019 | 12,035 | 1,030 | 8.6 | 52 | 0.4 | 1,209 | 10.0 | 1,484 | 12.3 | 16 | 0.1 | 7,295 | 60.6 | 356 | 3.0 | 593 | 4.9 |

[a] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.
[b] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.
[c] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**
Percentages may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017. Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-5a

## Enrollment intensity of graduate students in science, engineering and health, by degree program: 1975–2019

(Number and percent)

| Year | All science, engineering, and health graduate students | | | | | All science graduate students | | | | | All engineering graduate students | | | | | All health graduate students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Full time | | Part time | | | Full time | | Part time | | | Full time | | Part time | | | Full time | | Part time | |
| | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent | Total | Number | Percent | Number | Percent |
| 1975 | 328,510 | 219,648 | 66.9 | 108,862 | 33.1 | 234,649 | 164,437 | 70.1 | 70,212 | 29.9 | 68,332 | 37,823 | 55.4 | 30,509 | 44.6 | 25,529 | 17,388 | 68.1 | 8,141 | 31.9 |
| 1976 | 333,716 | 223,412 | 66.9 | 110,304 | 33.1 | 238,675 | 167,867 | 70.3 | 70,808 | 29.7 | 66,723 | 36,948 | 55.4 | 29,775 | 44.6 | 28,318 | 18,597 | 65.7 | 9,721 | 34.3 |
| 1977 | 345,374 | 226,738 | 65.6 | 118,636 | 34.4 | 242,932 | 169,184 | 69.6 | 73,748 | 30.4 | 68,757 | 37,227 | 54.1 | 31,530 | 45.9 | 33,685 | 20,327 | 60.3 | 13,358 | 39.7 |
| 1978[a] | 339,912 | 223,030 | 65.6 | 116,882 | 34.4 | 236,465 | 164,151 | 69.4 | 72,314 | 30.6 | 67,787 | 37,586 | 55.4 | 30,201 | 44.6 | 35,660 | 21,293 | 59.7 | 14,367 | 40.3 |
| 1979 | 357,578 | 231,760 | 64.8 | 125,818 | 35.2 | 247,235 | 168,959 | 68.3 | 78,276 | 31.7 | 71,808 | 40,041 | 55.8 | 31,767 | 44.2 | 38,535 | 22,760 | 59.1 | 15,775 | 40.9 |
| 1980 | 367,078 | 238,416 | 64.9 | 128,662 | 35.1 | 251,265 | 171,767 | 68.4 | 79,498 | 31.6 | 74,335 | 42,650 | 57.4 | 31,685 | 42.6 | 41,478 | 23,999 | 57.9 | 17,479 | 42.1 |
| 1981 | 375,130 | 242,049 | 64.5 | 133,081 | 35.5 | 252,404 | 172,200 | 68.2 | 80,204 | 31.8 | 79,585 | 45,752 | 57.5 | 33,833 | 42.5 | 43,141 | 24,097 | 55.9 | 19,044 | 44.1 |
| 1982 | 382,291 | 244,757 | 64.0 | 137,534 | 36.0 | 255,146 | 172,090 | 67.4 | 83,056 | 32.6 | 83,720 | 49,784 | 59.5 | 33,936 | 40.5 | 43,425 | 22,883 | 52.7 | 20,542 | 47.3 |
| 1983 | 390,432 | 252,017 | 64.5 | 138,415 | 35.5 | 255,820 | 175,472 | 68.6 | 80,348 | 31.4 | 91,146 | 53,932 | 59.2 | 37,214 | 40.8 | 43,466 | 22,613 | 52.0 | 20,853 | 48.0 |
| 1984 | 394,670 | 253,922 | 64.3 | 140,748 | 35.7 | 256,903 | 175,766 | 68.4 | 81,137 | 31.6 | 92,739 | 55,191 | 59.5 | 37,548 | 40.5 | 45,028 | 22,965 | 51.0 | 22,063 | 49.0 |
| 1985 | 404,021 | 257,287 | 63.7 | 146,734 | 36.3 | 261,973 | 178,020 | 68.0 | 83,953 | 32.0 | 96,018 | 55,918 | 58.2 | 40,100 | 41.8 | 46,030 | 23,349 | 50.7 | 22,681 | 49.3 |
| 1986 | 415,520 | 266,168 | 64.1 | 149,352 | 35.9 | 266,077 | 182,532 | 68.6 | 83,545 | 31.4 | 101,905 | 60,197 | 59.1 | 41,708 | 40.9 | 47,538 | 23,439 | 49.3 | 24,099 | 50.7 |
| 1987 | 421,497 | 271,056 | 64.3 | 150,441 | 35.7 | 269,256 | 185,143 | 68.8 | 84,113 | 31.2 | 103,983 | 61,962 | 59.6 | 42,021 | 40.4 | 48,258 | 23,951 | 49.6 | 24,307 | 50.4 |
| 1988 | 424,523 | 275,127 | 64.8 | 149,396 | 35.2 | 272,309 | 187,525 | 68.9 | 84,784 | 31.1 | 102,854 | 63,032 | 61.3 | 39,822 | 38.7 | 49,360 | 24,570 | 49.8 | 24,790 | 50.2 |
| 1989 | 434,478 | 282,648 | 65.1 | 151,830 | 34.9 | 278,577 | 192,424 | 69.1 | 86,153 | 30.9 | 104,065 | 64,396 | 61.9 | 39,669 | 38.1 | 51,836 | 25,828 | 49.8 | 26,008 | 50.2 |
| 1990 | 452,113 | 292,782 | 64.8 | 159,331 | 35.2 | 289,383 | 199,313 | 68.9 | 90,070 | 31.1 | 107,658 | 66,010 | 61.3 | 41,648 | 38.7 | 55,072 | 27,459 | 49.9 | 27,613 | 50.1 |
| 1991 | 471,212 | 307,010 | 65.2 | 164,202 | 34.8 | 299,057 | 206,036 | 68.9 | 93,021 | 31.1 | 113,535 | 71,034 | 62.6 | 42,501 | 37.4 | 58,620 | 29,940 | 51.1 | 28,680 | 48.9 |
| 1992 | 493,522 | 322,555 | 65.4 | 170,967 | 34.6 | 312,478 | 215,965 | 69.1 | 96,513 | 30.9 | 118,039 | 74,443 | 63.1 | 43,596 | 36.9 | 63,005 | 32,147 | 51.0 | 30,858 | 49.0 |
| 1993 | 504,304 | 329,644 | 65.4 | 174,660 | 34.6 | 318,851 | 220,097 | 69.0 | 98,754 | 31.0 | 116,872 | 73,808 | 63.2 | 43,064 | 36.8 | 68,581 | 35,739 | 52.1 | 32,842 | 47.9 |
| 1994 | 504,399 | 332,088 | 65.8 | 172,311 | 34.2 | 318,118 | 221,409 | 69.6 | 96,709 | 30.4 | 113,024 | 71,570 | 63.3 | 41,454 | 36.7 | 73,257 | 39,109 | 53.4 | 34,148 | 46.6 |
| 1995 | 499,640 | 329,283 | 65.9 | 170,357 | 34.1 | 315,265 | 219,389 | 69.6 | 95,876 | 30.4 | 107,201 | 67,782 | 63.2 | 39,419 | 36.8 | 77,174 | 42,112 | 54.6 | 35,062 | 45.4 |
| 1996 | 494,079 | 328,536 | 66.5 | 165,543 | 33.5 | 311,957 | 218,180 | 69.9 | 93,777 | 30.1 | 103,224 | 65,859 | 63.8 | 37,365 | 36.2 | 78,898 | 44,497 | 56.4 | 34,401 | 43.6 |
| 1997 | 487,208 | 327,289 | 67.2 | 159,919 | 32.8 | 306,482 | 214,981 | 70.1 | 91,501 | 29.9 | 101,148 | 65,688 | 64.9 | 35,460 | 35.1 | 79,578 | 46,620 | 58.6 | 32,958 | 41.4 |
| 1998 | 485,627 | 327,389 | 67.4 | 158,238 | 32.6 | 304,818 | 213,508 | 70.0 | 91,310 | 30.0 | 100,038 | 65,435 | 65.4 | 34,603 | 34.6 | 80,771 | 48,446 | 60.0 | 32,325 | 40.0 |
| 1999 | 493,256 | 334,423 | 67.8 | 158,833 | 32.2 | 309,491 | 215,870 | 69.8 | 93,621 | 30.2 | 101,691 | 68,023 | 66.9 | 33,668 | 33.1 | 82,074 | 50,530 | 61.6 | 31,544 | 38.4 |
| 2000 | 493,311 | 341,283 | 69.2 | 152,028 | 30.8 | 309,424 | 219,079 | 70.8 | 90,345 | 29.2 | 104,112 | 72,276 | 69.4 | 31,836 | 30.6 | 79,775 | 49,928 | 62.6 | 29,847 | 37.4 |
| 2001 | 509,607 | 354,522 | 69.6 | 155,085 | 30.4 | 319,736 | 226,573 | 70.9 | 93,163 | 29.1 | 109,493 | 77,448 | 70.7 | 32,045 | 29.3 | 80,378 | 50,501 | 62.8 | 29,877 | 37.2 |
| 2002 | 540,404 | 378,991 | 70.1 | 161,413 | 29.9 | 335,166 | 240,020 | 71.6 | 95,146 | 28.4 | 119,668 | 85,452 | 71.4 | 34,216 | 28.6 | 85,570 | 53,519 | 62.5 | 32,051 | 37.5 |
| 2003 | 567,121 | 397,420 | 70.1 | 169,701 | 29.9 | 347,268 | 248,812 | 71.6 | 98,456 | 28.4 | 127,377 | 90,216 | 70.8 | 37,161 | 29.2 | 92,476 | 58,392 | 63.1 | 34,084 | 36.9 |
| 2004 | 574,463 | 402,573 | 70.1 | 171,890 | 29.9 | 352,307 | 253,574 | 72.0 | 98,733 | 28.0 | 123,566 | 86,955 | 70.4 | 36,611 | 29.6 | 98,590 | 62,044 | 62.9 | 36,546 | 37.1 |
| 2005 | 582,226 | 406,620 | 69.8 | 175,606 | 30.2 | 357,710 | 257,283 | 71.9 | 100,427 | 28.1 | 120,565 | 84,459 | 70.1 | 36,106 | 29.9 | 103,951 | 64,878 | 62.4 | 39,073 | 37.6 |
| 2006 | 597,643 | 419,015 | 70.1 | 178,628 | 29.9 | 363,246 | 261,984 | 72.1 | 101,262 | 27.9 | 123,041 | 87,818 | 71.4 | 35,223 | 28.6 | 111,356 | 69,213 | 62.2 | 42,143 | 37.8 |
| 2007old[b] | 607,823 | 430,860 | 70.9 | 176,963 | 29.1 | 372,120 | 269,821 | 72.5 | 102,299 | 27.5 | 130,255 | 93,155 | 71.5 | 37,100 | 28.5 | 105,448 | 67,884 | 64.4 | 37,564 | 35.6 |

TABLE 1-5a

## Enrollment intensity of graduate students in science, engineering and health, by degree program: 1975–2019

(Number and percent)

| Year | All science, engineering, and health graduate students | | | | | All science graduate students | | | | | All engineering graduate students | | | | | All health graduate students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Full time | | Part time | | Total | Full time | | Part time | | Total | Full time | | Part time | | Total | Full time | | Part time | |
| | | Number | Percent | Number | Percent | | Number | Percent | Number | Percent | | Number | Percent | Number | Percent | | Number | Percent | Number | Percent |
| 2007new[b] | 619,499 | 437,365 | 70.6 | 182,134 | 29.4 | 384,523 | 277,229 | 72.1 | 107,294 | 27.9 | 131,676 | 94,313 | 71.6 | 37,363 | 28.4 | 103,300 | 65,823 | 63.7 | 37,477 | 36.3 |
| 2008 | 631,489 | 449,613 | 71.2 | 181,876 | 28.8 | 391,419 | 285,305 | 72.9 | 106,114 | 27.1 | 137,856 | 98,255 | 71.3 | 39,601 | 28.7 | 102,214 | 66,053 | 64.6 | 36,161 | 35.4 |
| 2009 | 631,645 | 456,115 | 72.2 | 175,530 | 27.8 | 401,008 | 293,561 | 73.2 | 107,447 | 26.8 | 144,677 | 104,937 | 72.5 | 39,740 | 27.5 | 85,960 | 57,617 | 67.0 | 28,343 | 33.0 |
| 2010 | 632,652 | 461,185 | 72.9 | 171,467 | 27.1 | 407,291 | 299,315 | 73.5 | 107,976 | 26.5 | 149,241 | 109,792 | 73.6 | 39,449 | 26.4 | 76,120 | 52,078 | 68.4 | 24,042 | 31.6 |
| 2011 | 626,820 | 457,292 | 73.0 | 169,528 | 27.0 | 414,440 | 303,015 | 73.1 | 111,425 | 26.9 | 146,501 | 108,153 | 73.8 | 38,348 | 26.2 | 65,879 | 46,124 | 70.0 | 19,755 | 30.0 |
| 2012 | 627,243 | 459,498 | 73.3 | 167,745 | 26.7 | 413,033 | 304,795 | 73.8 | 108,238 | 26.2 | 148,385 | 109,589 | 73.9 | 38,796 | 26.1 | 65,825 | 45,114 | 68.5 | 20,711 | 31.5 |
| 2013 | 633,010 | 468,953 | 74.1 | 164,057 | 25.9 | 417,251 | 309,756 | 74.2 | 107,495 | 25.8 | 153,049 | 114,752 | 75.0 | 38,297 | 25.0 | 62,710 | 44,445 | 70.9 | 18,265 | 29.1 |
| 2014old[c] | 650,738 | 484,880 | 74.5 | 165,858 | 25.5 | 425,148 | 317,881 | 74.8 | 107,267 | 25.2 | 162,013 | 122,642 | 75.7 | 39,371 | 24.3 | 63,577 | 44,357 | 69.8 | 19,220 | 30.2 |
| 2014new[c] | 666,586 | 492,170 | 73.8 | 174,416 | 26.2 | 437,395 | 322,714 | 73.8 | 114,681 | 26.2 | 164,488 | 124,382 | 75.6 | 40,106 | 24.4 | 64,703 | 45,074 | 69.7 | 19,629 | 30.3 |
| 2015 | 685,397 | 506,262 | 73.9 | 179,135 | 26.1 | 448,654 | 331,293 | 73.8 | 117,361 | 26.2 | 169,354 | 128,112 | 75.6 | 41,242 | 24.4 | 67,389 | 46,857 | 69.5 | 20,532 | 30.5 |
| 2016 | 684,825 | 508,773 | 74.3 | 176,052 | 25.7 | 452,046 | 334,770 | 74.1 | 117,276 | 25.9 | 168,443 | 128,203 | 76.1 | 40,240 | 23.9 | 64,336 | 45,800 | 71.2 | 18,536 | 28.8 |
| 2017old[d] | 684,096 | 498,619 | 72.9 | 185,477 | 27.1 | 450,343 | 327,596 | 72.7 | 122,747 | 27.3 | 166,819 | 124,363 | 74.5 | 42,456 | 25.5 | 66,934 | 46,660 | 69.7 | 20,274 | 30.3 |
| 2017new[d] | 649,112 | 480,788 | 74.1 | 168,324 | 25.9 | 415,568 | 310,809 | 74.8 | 104,759 | 25.2 | 165,581 | 123,107 | 74.3 | 42,474 | 25.7 | 67,963 | 46,872 | 69.0 | 21,091 | 31.0 |
| 2018 | 668,307 | 491,449 | 73.5 | 176,858 | 26.5 | 432,255 | 321,063 | 74.3 | 111,192 | 25.7 | 163,301 | 120,521 | 73.8 | 42,780 | 26.2 | 72,751 | 49,865 | 68.5 | 22,886 | 31.5 |
| 2019 | 690,117 | 502,442 | 72.8 | 187,675 | 27.2 | 453,691 | 331,673 | 73.1 | 122,018 | 26.9 | 164,004 | 121,117 | 73.9 | 42,887 | 26.1 | 72,422 | 49,652 | 68.6 | 22,770 | 31.4 |
| Master's students | | | | | | | | | | | | | | | | | | | | |
| 2017new[d] | 378,587 | 245,010 | 64.7 | 133,577 | 35.3 | 229,169 | 145,689 | 63.6 | 83,480 | 36.4 | 96,756 | 63,532 | 65.7 | 33,224 | 34.3 | 52,662 | 35,789 | 68.0 | 16,873 | 32.0 |
| 2018 | 391,211 | 248,552 | 63.5 | 142,659 | 36.5 | 241,327 | 151,059 | 62.6 | 90,268 | 37.4 | 93,064 | 59,228 | 63.6 | 33,836 | 36.4 | 56,820 | 38,265 | 67.3 | 18,555 | 32.7 |
| 2019 | 408,228 | 254,532 | 62.4 | 153,696 | 37.6 | 259,795 | 158,704 | 61.1 | 101,091 | 38.9 | 91,939 | 57,723 | 62.8 | 34,216 | 37.2 | 56,494 | 38,105 | 67.4 | 18,389 | 32.6 |
| Doctoral students | | | | | | | | | | | | | | | | | | | | |
| 2017new[d] | 270,525 | 235,778 | 87.2 | 34,747 | 12.8 | 186,399 | 165,120 | 88.6 | 21,279 | 11.4 | 68,825 | 59,575 | 86.6 | 9,250 | 13.4 | 15,301 | 11,083 | 72.4 | 4,218 | 27.6 |
| 2018 | 277,096 | 242,897 | 87.7 | 34,199 | 12.3 | 190,928 | 170,004 | 89.0 | 20,924 | 11.0 | 70,237 | 61,293 | 87.3 | 8,944 | 12.7 | 15,931 | 11,600 | 72.8 | 4,331 | 27.2 |
| 2019 | 281,889 | 247,910 | 87.9 | 33,979 | 12.1 | 193,896 | 172,969 | 89.2 | 20,927 | 10.8 | 72,065 | 63,394 | 88.0 | 8,671 | 12.0 | 15,928 | 11,547 | 72.5 | 4,381 | 27.5 |

[a] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[d] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**
Percentages may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-5b

## First-time status among full-time graduate students in science, engineering and health, by degree level: 1975–2019

(Number and percent)

| Year | All full-time graduate students | | | Full-time master's students | | | Full-time doctoral students | | |
|---|---|---|---|---|---|---|---|---|---|
| | | First time | | | First time | | | First time | |
| | Total | Number | Percent | Total | Number | Percent | Total | Number | Percent |
| 1975 | 219,648 | 76,686 | 34.9 | na | na | na | na | na | na |
| 1976 | 223,412 | 90,811 | 40.6 | na | na | na | na | na | na |
| 1977 | 226,738 | 93,116 | 41.1 | na | na | na | na | na | na |
| 1978[a] | 223,030 | 70,578 | 31.6 | na | na | na | na | na | na |
| 1979 | 231,760 | 76,788 | 33.1 | na | na | na | na | na | na |
| 1980 | 238,416 | 81,259 | 34.1 | na | na | na | na | na | na |
| 1981 | 242,049 | 80,003 | 33.1 | na | na | na | na | na | na |
| 1982 | 244,757 | 80,257 | 32.8 | na | na | na | na | na | na |
| 1983 | 252,017 | 81,606 | 32.4 | na | na | na | na | na | na |
| 1984 | 253,922 | 80,186 | 31.6 | na | na | na | na | na | na |
| 1985 | 257,287 | 80,678 | 31.4 | na | na | na | na | na | na |
| 1986 | 266,168 | 82,548 | 31.0 | na | na | na | na | na | na |
| 1987 | 271,056 | 80,843 | 29.8 | na | na | na | na | na | na |
| 1988 | 275,127 | 80,580 | 29.3 | na | na | na | na | na | na |
| 1989 | 282,648 | 84,532 | 29.9 | na | na | na | na | na | na |
| 1990 | 292,782 | 87,401 | 29.9 | na | na | na | na | na | na |
| 1991 | 307,010 | 93,147 | 30.3 | na | na | na | na | na | na |
| 1992 | 322,555 | 95,802 | 29.7 | na | na | na | na | na | na |
| 1993 | 329,644 | 92,748 | 28.1 | na | na | na | na | na | na |
| 1994 | 332,088 | 92,171 | 27.8 | na | na | na | na | na | na |
| 1995 | 329,283 | 89,482 | 27.2 | na | na | na | na | na | na |
| 1996 | 328,536 | 88,984 | 27.1 | na | na | na | na | na | na |
| 1997 | 327,289 | 89,177 | 27.2 | na | na | na | na | na | na |
| 1998 | 327,389 | 90,828 | 27.7 | na | na | na | na | na | na |
| 1999 | 334,423 | 92,214 | 27.6 | na | na | na | na | na | na |
| 2000 | 341,283 | 94,340 | 27.6 | na | na | na | na | na | na |
| 2001 | 354,522 | 98,112 | 27.7 | na | na | na | na | na | na |
| 2002 | 378,991 | 104,184 | 27.5 | na | na | na | na | na | na |
| 2003 | 397,420 | 107,715 | 27.1 | na | na | na | na | na | na |
| 2004 | 402,573 | 106,544 | 26.5 | na | na | na | na | na | na |
| 2005 | 406,620 | 110,219 | 27.1 | na | na | na | na | na | na |
| 2006 | 419,015 | 116,482 | 27.8 | na | na | na | na | na | na |
| 2007old[b] | 430,860 | 120,236 | 27.9 | na | na | na | na | na | na |
| 2007new[b] | 437,365 | 122,449 | 28.0 | na | na | na | na | na | na |
| 2008 | 449,613 | 130,635 | 29.1 | na | na | na | na | na | na |
| 2009 | 456,115 | 134,756 | 29.5 | na | na | na | na | na | na |
| 2010 | 461,185 | 136,487 | 29.6 | na | na | na | na | na | na |
| 2011 | 457,292 | 136,610 | 29.9 | na | na | na | na | na | na |
| 2012 | 459,498 | 137,767 | 30.0 | na | na | na | na | na | na |
| 2013 | 468,953 | 143,326 | 30.6 | na | na | na | na | na | na |
| 2014old[c] | 484,880 | 150,653 | 31.1 | na | na | na | na | na | na |
| 2014new[c] | 492,170 | 154,219 | 31.3 | na | na | na | na | na | na |
| 2015 | 506,262 | 161,640 | 31.9 | na | na | na | na | na | na |
| 2016 | 508,773 | 161,824 | 31.8 | na | na | na | na | na | na |
| 2017old[d] | 498,619 | 162,805 | 32.7 | na | na | na | na | na | na |
| 2017new[d] | 480,788 | 156,157 | 32.5 | 245,010 | 110,980 | 45.3 | 235,778 | 45,177 | 19.2 |
| 2018 | 491,449 | 159,724 | 32.5 | 248,552 | 114,214 | 46.0 | 242,897 | 45,510 | 18.7 |
| 2019 | 502,442 | 163,032 | 32.4 | 254,532 | 116,507 | 45.8 | 247,910 | 46,525 | 18.8 |

na = not applicable; master's and doctoral students were not reported separately until 2017.

[a] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[d] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-6

## Primary source of support for full-time graduate students in science, engineering, and health: 1975–2019

(Number and percent)

| Year | Total | Federal | | Institutional | | Nonfederal domestic | | Foreign | | Personal resources | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 1975 | 219,648 | 47,055 | 21.4 | 76,170 | 34.7 | 11,189 | 5.1 | 5,374 | 2.4 | 79,860 | 36.4 |
| 1976 | 223,412 | 49,036 | 21.9 | 81,839 | 36.6 | 11,830 | 5.3 | 6,279 | 2.8 | 74,428 | 33.3 |
| 1977 | 226,738 | 50,809 | 22.4 | 82,994 | 36.6 | 11,883 | 5.2 | 6,879 | 3.0 | 74,173 | 32.7 |
| 1978[a] | 223,030 | 51,984 | 23.3 | 81,676 | 36.6 | 19,450 | 8.7 | na | na | 69,920 | 31.4 |
| 1979 | 231,760 | 52,682 | 22.7 | 84,879 | 36.6 | 12,577 | 5.4 | 7,773 | 3.4 | 73,849 | 31.9 |
| 1980 | 238,416 | 52,959 | 22.2 | 88,691 | 37.2 | 13,068 | 5.5 | 8,241 | 3.5 | 75,457 | 31.6 |
| 1981 | 242,049 | 50,896 | 21.0 | 92,089 | 38.0 | 13,735 | 5.7 | 8,807 | 3.6 | 76,522 | 31.6 |
| 1982 | 244,757 | 47,403 | 19.4 | 95,271 | 38.9 | 15,128 | 6.2 | 9,059 | 3.7 | 77,896 | 31.8 |
| 1983 | 252,017 | 47,752 | 18.9 | 98,149 | 38.9 | 15,904 | 6.3 | 8,979 | 3.6 | 81,233 | 32.2 |
| 1984 | 253,922 | 47,784 | 18.8 | 102,175 | 40.2 | 16,638 | 6.6 | 8,175 | 3.2 | 79,150 | 31.2 |
| 1985 | 257,287 | 49,051 | 19.1 | 104,058 | 40.4 | 18,778 | 7.3 | 7,770 | 3.0 | 77,630 | 30.2 |
| 1986 | 266,168 | 51,361 | 19.3 | 109,199 | 41.0 | 19,056 | 7.2 | 7,672 | 2.9 | 78,880 | 29.6 |
| 1987 | 271,056 | 53,538 | 19.8 | 112,263 | 41.4 | 18,275 | 6.7 | 7,200 | 2.7 | 79,780 | 29.4 |
| 1988 | 275,127 | 55,489 | 20.2 | 114,740 | 41.7 | 18,737 | 6.8 | 7,001 | 2.5 | 79,160 | 28.8 |
| 1989 | 282,648 | 57,433 | 20.3 | 119,114 | 42.1 | 19,140 | 6.8 | 6,710 | 2.4 | 80,251 | 28.4 |
| 1990 | 292,782 | 59,258 | 20.2 | 123,005 | 42.0 | 19,604 | 6.7 | 6,531 | 2.2 | 84,384 | 28.8 |
| 1991 | 307,010 | 63,000 | 20.5 | 125,329 | 40.8 | 20,455 | 6.7 | 6,643 | 2.2 | 91,583 | 29.8 |
| 1992 | 322,555 | 65,607 | 20.3 | 127,846 | 39.6 | 21,343 | 6.6 | 6,460 | 2.0 | 101,299 | 31.4 |
| 1993 | 329,644 | 67,673 | 20.5 | 128,950 | 39.1 | 21,264 | 6.5 | 5,481 | 1.7 | 106,276 | 32.2 |
| 1994 | 332,088 | 68,550 | 20.6 | 129,218 | 38.9 | 21,567 | 6.5 | 5,718 | 1.7 | 107,035 | 32.2 |
| 1995 | 329,283 | 67,294 | 20.4 | 129,320 | 39.3 | 20,435 | 6.2 | 5,547 | 1.7 | 106,687 | 32.4 |
| 1996 | 328,536 | 65,240 | 19.9 | 128,379 | 39.1 | 20,193 | 6.1 | 5,249 | 1.6 | 109,475 | 33.3 |
| 1997 | 327,289 | 64,522 | 19.7 | 128,927 | 39.4 | 20,251 | 6.2 | 4,848 | 1.5 | 108,741 | 33.2 |
| 1998 | 327,389 | 63,759 | 19.5 | 128,995 | 39.4 | 22,157 | 6.8 | 4,254 | 1.3 | 108,224 | 33.1 |
| 1999 | 334,423 | 65,796 | 19.7 | 133,182 | 39.8 | 22,099 | 6.6 | 3,930 | 1.2 | 109,416 | 32.7 |
| 2000 | 341,283 | 67,588 | 19.8 | 133,415 | 39.1 | 24,000 | 7.0 | 3,848 | 1.1 | 112,432 | 32.9 |
| 2001 | 354,522 | 68,843 | 19.4 | 140,787 | 39.7 | 24,420 | 6.9 | 3,836 | 1.1 | 116,636 | 32.9 |
| 2002 | 378,991 | 75,538 | 19.9 | 147,883 | 39.0 | 25,557 | 6.7 | 3,359 | 0.9 | 126,654 | 33.4 |
| 2003 | 397,420 | 81,761 | 20.6 | 151,713 | 38.2 | 26,118 | 6.6 | 3,098 | 0.8 | 134,730 | 33.9 |
| 2004 | 402,573 | 83,816 | 20.8 | 154,514 | 38.4 | 24,325 | 6.0 | 2,840 | 0.7 | 137,078 | 34.1 |
| 2005 | 406,620 | 83,723 | 20.6 | 156,332 | 38.4 | 24,548 | 6.0 | 2,614 | 0.6 | 139,403 | 34.3 |
| 2006 | 419,015 | 83,962 | 20.0 | 160,405 | 38.3 | 25,384 | 6.1 | 2,658 | 0.6 | 146,606 | 35.0 |
| 2007old[b] | 430,860 | 81,542 | 18.9 | 167,836 | 39.0 | 24,262 | 5.6 | 2,927 | 0.7 | 154,293 | 35.8 |
| 2007new[b] | 437,365 | 81,859 | 18.7 | 171,128 | 39.1 | 24,410 | 5.6 | 2,939 | 0.7 | 157,029 | 35.9 |
| 2008 | 449,613 | 78,464 | 17.5 | 179,439 | 39.9 | 22,238 | 4.9 | 3,814 | 0.8 | 165,658 | 36.8 |
| 2009 | 456,115 | 81,565 | 17.9 | 177,680 | 39.0 | 22,910 | 5.0 | 4,004 | 0.9 | 169,956 | 37.3 |
| 2010 | 461,185 | 86,310 | 18.7 | 177,946 | 38.6 | 22,127 | 4.8 | 4,238 | 0.9 | 170,564 | 37.0 |
| 2011 | 457,292 | 85,220 | 18.6 | 179,895 | 39.3 | 21,717 | 4.7 | 4,653 | 1.0 | 165,807 | 36.3 |
| 2012 | 459,498 | 80,962 | 17.6 | 183,965 | 40.0 | 22,443 | 4.9 | 5,228 | 1.1 | 166,900 | 36.3 |
| 2013 | 468,953 | 76,840 | 16.4 | 189,440 | 40.4 | 20,514 | 4.4 | 5,371 | 1.1 | 176,788 | 37.7 |
| 2014old[c] | 484,880 | 72,507 | 15.0 | 195,446 | 40.3 | 19,970 | 4.1 | 5,809 | 1.2 | 191,148 | 39.4 |
| 2014new[c] | 492,170 | 72,756 | 14.8 | 196,810 | 40.0 | 20,035 | 4.1 | 5,882 | 1.2 | 196,687 | 40.0 |
| 2015 | 506,262 | 72,393 | 14.3 | 201,681 | 39.8 | 20,771 | 4.1 | 5,739 | 1.1 | 205,678 | 40.6 |
| 2016 | 508,773 | 71,955 | 14.1 | 203,823 | 40.1 | 19,793 | 3.9 | 5,020 | 1.0 | 208,182 | 40.9 |
| 2017old[d] | 498,619 | 69,899 | 14.0 | 201,388 | 40.4 | 21,211 | 4.3 | 5,271 | 1.1 | 200,850 | 40.3 |
| 2017new[d] | 480,788 | 69,537 | 14.5 | 194,550 | 40.5 | 20,833 | 4.3 | 5,175 | 1.1 | 190,693 | 39.7 |
| 2018 | 491,449 | 71,594 | 14.6 | 199,298 | 40.6 | 19,568 | 4.0 | 4,875 | 1.0 | 196,114 | 39.9 |
| 2019 | 502,442 | 73,605 | 14.6 | 205,890 | 41.0 | 19,171 | 3.8 | 4,699 | 0.9 | 199,077 | 39.6 |

TABLE 1-6

## Primary source of support for full-time graduate students in science, engineering, and health: 1975–2019

(Number and percent)

| Year | Total | Federal | | Institutional | | Nonfederal domestic | | Foreign | | Personal resources | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Master's students | | | | | | | | | | | |
| 2017new[d] | 245,010 | 12,354 | 5.0 | 59,385 | 24.2 | 5,884 | 2.4 | 1,902 | 0.8 | 165,485 | 67.5 |
| 2018 | 248,552 | 12,324 | 5.0 | 57,999 | 23.3 | 4,758 | 1.9 | 1,541 | 0.6 | 171,930 | 69.2 |
| 2019 | 254,532 | 11,491 | 4.5 | 60,153 | 23.6 | 4,914 | 1.9 | 1,517 | 0.6 | 176,457 | 69.3 |
| Doctoral students | | | | | | | | | | | |
| 2017new[d] | 235,778 | 57,183 | 24.3 | 135,165 | 57.3 | 14,949 | 6.3 | 3,273 | 1.4 | 25,208 | 10.7 |
| 2018 | 242,897 | 59,270 | 24.4 | 141,299 | 58.2 | 14,810 | 6.1 | 3,334 | 1.4 | 24,184 | 10.0 |
| 2019 | 247,910 | 62,114 | 25.1 | 145,737 | 58.8 | 14,257 | 5.8 | 3,182 | 1.3 | 22,620 | 9.1 |

na = not applicable.

[a] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[d] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**

Percentages may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-7

## Detailed primary source of federal support for full-time graduate students in science, engineering, and health: 1975–2019

(Number and percent)

| Year | Total | DOD | | DOE | | HHS: NIH | | HHS: Other HHS | | NASA | | NSF | | USDA | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 1975 | 47,055 | 5,061 | 10.8 | NA | NA | 12,141 | 25.8 | 7,836 | 16.7 | NA | NA | 8,790 | 18.7 | NA | NA | 13,227 | 28.1 |
| 1976 | 49,036 | 4,772 | 9.7 | NA | NA | 11,307 | 23.1 | 8,341 | 17.0 | NA | NA | 8,953 | 18.3 | NA | NA | 15,663 | 31.9 |
| 1977 | 50,809 | 4,971 | 9.8 | NA | NA | 10,861 | 21.4 | 9,397 | 18.5 | NA | NA | 9,018 | 17.7 | NA | NA | 16,562 | 32.6 |
| 1978[a] | 51,984 | NA | NA | NA | NA | 10,825 | 20.8 | 10,060 | 19.4 | NA | NA | 9,007 | 17.3 | NA | NA | 22,092 | 42.5 |
| 1979 | 52,682 | 4,990 | 9.5 | NA | NA | 11,648 | 22.1 | 10,482 | 19.9 | NA | NA | 9,366 | 17.8 | NA | NA | 16,196 | 30.7 |
| 1980 | 52,959 | 5,251 | 9.9 | NA | NA | 11,499 | 21.7 | 7,522 | 14.2 | NA | NA | 9,348 | 17.7 | NA | NA | 19,339 | 36.5 |
| 1981 | 50,896 | 5,664 | 11.1 | NA | NA | 11,179 | 22.0 | 6,429 | 12.6 | NA | NA | 9,143 | 18.0 | NA | NA | 18,481 | 36.3 |
| 1982 | 47,403 | 5,941 | 12.5 | NA | NA | 10,814 | 22.8 | 4,975 | 10.5 | NA | NA | 9,257 | 19.5 | NA | NA | 16,416 | 34.6 |
| 1983 | 47,752 | 6,969 | 14.6 | NA | NA | 10,810 | 22.6 | 4,179 | 8.8 | NA | NA | 9,524 | 19.9 | NA | NA | 16,270 | 34.1 |
| 1984 | 47,784 | 7,125 | 14.9 | NA | NA | 10,983 | 23.0 | 4,124 | 8.6 | NA | NA | 9,848 | 20.6 | NA | NA | 15,704 | 32.9 |
| 1985 | 49,051 | 7,326 | 14.9 | NA | NA | 11,112 | 22.7 | 4,740 | 9.7 | NA | NA | 10,180 | 20.8 | 2,171 | 4.4 | 13,522 | 27.6 |
| 1986 | 51,361 | 7,940 | 15.5 | NA | NA | 11,877 | 23.1 | 4,500 | 8.8 | NA | NA | 10,826 | 21.1 | 2,328 | 4.5 | 13,890 | 27.0 |
| 1987 | 53,538 | 8,795 | 16.4 | NA | NA | 12,944 | 24.2 | 4,247 | 7.9 | NA | NA | 11,247 | 21.0 | 2,684 | 5.0 | 13,621 | 25.4 |
| 1988 | 55,489 | 9,546 | 17.2 | NA | NA | 13,715 | 24.7 | 4,186 | 7.5 | NA | NA | 11,634 | 21.0 | 2,591 | 4.7 | 13,817 | 24.9 |
| 1989 | 57,433 | 9,140 | 15.9 | NA | NA | 14,357 | 25.0 | 4,335 | 7.5 | NA | NA | 11,900 | 20.7 | 2,728 | 4.7 | 14,973 | 26.1 |
| 1990 | 59,258 | 8,868 | 15.0 | NA | NA | 14,996 | 25.3 | 4,512 | 7.6 | NA | NA | 12,025 | 20.3 | 2,722 | 4.6 | 16,135 | 27.2 |
| 1991 | 63,000 | 9,128 | 14.5 | NA | NA | 16,018 | 25.4 | 4,461 | 7.1 | NA | NA | 12,666 | 20.1 | 3,075 | 4.9 | 17,652 | 28.0 |
| 1992 | 65,607 | 9,247 | 14.1 | NA | NA | 17,091 | 26.1 | 4,321 | 6.6 | NA | NA | 13,366 | 20.4 | 3,216 | 4.9 | 18,366 | 28.0 |
| 1993 | 67,673 | 9,750 | 14.4 | NA | NA | 18,135 | 26.8 | 3,888 | 5.7 | NA | NA | 13,530 | 20.0 | 3,324 | 4.9 | 19,046 | 28.1 |
| 1994 | 68,550 | 9,449 | 13.8 | NA | NA | 18,292 | 26.7 | 4,374 | 6.4 | NA | NA | 13,990 | 20.4 | 3,422 | 5.0 | 19,023 | 27.8 |
| 1995 | 67,294 | 9,339 | 13.9 | NA | NA | 18,109 | 26.9 | 4,666 | 6.9 | NA | NA | 13,661 | 20.3 | 3,254 | 4.8 | 18,265 | 27.1 |
| 1996 | 65,240 | 8,802 | 13.5 | NA | NA | 17,929 | 27.5 | 4,432 | 6.8 | 2,309 | 3.5 | 13,412 | 20.6 | 3,004 | 4.6 | 15,352 | 23.5 |
| 1997 | 64,522 | 9,021 | 14.0 | NA | NA | 18,087 | 28.0 | 4,443 | 6.9 | 2,586 | 4.0 | 13,362 | 20.7 | 2,646 | 4.1 | 14,377 | 22.3 |
| 1998 | 63,759 | 8,259 | 13.0 | NA | NA | 18,215 | 28.6 | 4,489 | 7.0 | 2,646 | 4.2 | 13,459 | 21.1 | 2,485 | 3.9 | 14,206 | 22.3 |
| 1999 | 65,796 | 8,026 | 12.2 | 2,749 | 4.2 | 19,019 | 28.9 | 4,423 | 6.7 | 2,579 | 3.9 | 13,835 | 21.0 | 2,634 | 4.0 | 12,531 | 19.0 |
| 2000 | 67,588 | 8,141 | 12.0 | 2,995 | 4.4 | 19,472 | 28.8 | 4,018 | 5.9 | 2,780 | 4.1 | 14,599 | 21.6 | 2,630 | 3.9 | 12,953 | 19.2 |
| 2001 | 68,843 | 7,960 | 11.6 | 3,116 | 4.5 | 19,904 | 28.9 | 4,433 | 6.4 | 2,819 | 4.1 | 15,429 | 22.4 | 2,735 | 4.0 | 12,447 | 18.1 |
| 2002 | 75,538 | 7,977 | 10.6 | 3,548 | 4.7 | 22,129 | 29.3 | 4,830 | 6.4 | 3,082 | 4.1 | 17,135 | 22.7 | 3,100 | 4.1 | 13,737 | 18.2 |
| 2003 | 81,761 | 9,204 | 11.3 | 4,024 | 4.9 | 24,309 | 29.7 | 4,922 | 6.0 | 3,230 | 4.0 | 19,308 | 23.6 | 3,468 | 4.2 | 13,296 | 16.3 |
| 2004 | 83,816 | 9,007 | 10.7 | 4,135 | 4.9 | 26,689 | 31.8 | 4,211 | 5.0 | 2,916 | 3.5 | 19,975 | 23.8 | 3,563 | 4.3 | 13,320 | 15.9 |
| 2005 | 83,723 | 8,993 | 10.7 | 4,392 | 5.2 | 26,868 | 32.1 | 3,912 | 4.7 | 2,691 | 3.2 | 20,387 | 24.4 | 3,351 | 4.0 | 13,129 | 15.7 |
| 2006 | 83,962 | 8,867 | 10.6 | 4,480 | 5.3 | 27,587 | 32.9 | 3,662 | 4.4 | 2,364 | 2.8 | 20,339 | 24.2 | 3,000 | 3.6 | 13,663 | 16.3 |
| 2007old[b] | 81,542 | 8,874 | 10.9 | 4,281 | 5.3 | 26,982 | 33.1 | 3,067 | 3.8 | 2,314 | 2.8 | 19,747 | 24.2 | 2,796 | 3.4 | 13,481 | 16.5 |
| 2007new[b] | 81,859 | 8,885 | 10.9 | 4,284 | 5.2 | 27,015 | 33.0 | 3,086 | 3.8 | 2,317 | 2.8 | 19,792 | 24.2 | 2,810 | 3.4 | 13,670 | 16.7 |
| 2008 | 78,464 | 8,219 | 10.5 | 4,341 | 5.5 | 26,003 | 33.1 | 2,496 | 3.2 | 2,344 | 3.0 | 19,882 | 25.3 | 2,770 | 3.5 | 12,409 | 15.8 |

TABLE 1-7

## Detailed primary source of federal support for full-time graduate students in science, engineering, and health: 1975–2019

(Number and percent)

| Year | Total | DOD | | DOE | | HHS: NIH | | HHS: Other HHS | | NASA | | NSF | | USDA | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 2009 | 81,565 | 8,683 | 10.6 | 4,608 | 5.6 | 26,506 | 32.5 | 2,200 | 2.7 | 2,426 | 3.0 | 21,682 | 26.6 | 2,706 | 3.3 | 12,754 | 15.6 |
| 2010 | 86,310 | 9,233 | 10.7 | 5,512 | 6.4 | 27,615 | 32.0 | 2,255 | 2.6 | 2,472 | 2.9 | 23,226 | 26.9 | 3,061 | 3.5 | 12,936 | 15.0 |
| 2011 | 85,220 | 9,107 | 10.7 | 5,738 | 6.7 | 25,670 | 30.1 | 2,201 | 2.6 | 2,394 | 2.8 | 24,226 | 28.4 | 2,862 | 3.4 | 13,022 | 15.3 |
| 2012 | 80,962 | 8,748 | 10.8 | 5,343 | 6.6 | 24,256 | 30.0 | 1,921 | 2.4 | 2,173 | 2.7 | 24,243 | 29.9 | 2,664 | 3.3 | 11,614 | 14.3 |
| 2013 | 76,840 | 8,304 | 10.8 | 4,803 | 6.3 | 22,372 | 29.1 | 1,642 | 2.1 | 2,006 | 2.6 | 23,307 | 30.3 | 2,577 | 3.4 | 11,829 | 15.4 |
| 2014old[c] | 72,507 | 7,445 | 10.3 | 4,398 | 6.1 | 21,153 | 29.2 | 1,365 | 1.9 | 2,005 | 2.8 | 22,791 | 31.4 | 2,400 | 3.3 | 10,950 | 15.1 |
| 2014new[c] | 72,756 | 7,454 | 10.2 | 4,401 | 6.0 | 21,191 | 29.1 | 1,382 | 1.9 | 2,013 | 2.8 | 22,899 | 31.5 | 2,420 | 3.3 | 10,996 | 15.1 |
| 2015 | 72,393 | 8,127 | 11.2 | 4,309 | 6.0 | 20,641 | 28.5 | 1,715 | 2.4 | 2,036 | 2.8 | 22,924 | 31.7 | 2,676 | 3.7 | 9,965 | 13.8 |
| 2016 | 71,955 | 8,291 | 11.5 | 4,482 | 6.2 | 20,381 | 28.3 | 1,635 | 2.3 | 2,025 | 2.8 | 22,677 | 31.5 | 2,535 | 3.5 | 9,929 | 13.8 |
| 2017old[d] | 69,899 | 8,365 | 12.0 | 4,480 | 6.4 | 19,687 | 28.2 | 1,727 | 2.5 | 1,821 | 2.6 | 21,010 | 30.1 | 2,444 | 3.5 | 10,365 | 14.8 |
| 2017new[d] | 69,537 | 8,323 | 12.0 | 4,480 | 6.4 | 19,645 | 28.3 | 1,719 | 2.5 | 1,818 | 2.6 | 20,946 | 30.1 | 2,415 | 3.5 | 10,191 | 14.7 |
| 2018 | 71,594 | 7,600 | 10.6 | 4,568 | 6.4 | 19,903 | 27.8 | 2,842 | 4.0 | 1,899 | 2.7 | 21,711 | 30.3 | 2,619 | 3.7 | 10,452 | 14.6 |
| 2019 | 73,605 | 8,495 | 11.5 | 5,119 | 7.0 | 21,025 | 28.6 | 2,498 | 3.4 | 2,057 | 2.8 | 21,801 | 29.6 | 2,580 | 3.5 | 10,030 | 13.6 |
| Master's students | | | | | | | | | | | | | | | | | |
| 2017new[d] | 12,354 | 2,756 | 22.3 | 491 | 4.0 | 1,014 | 8.2 | 310 | 2.5 | 286 | 2.3 | 2,212 | 17.9 | 962 | 7.8 | 4,323 | 35.0 |
| 2018 | 12,324 | 2,345 | 19.0 | 412 | 3.3 | 975 | 7.9 | 539 | 4.4 | 300 | 2.4 | 2,160 | 17.5 | 1,059 | 8.6 | 4,534 | 36.8 |
| 2019 | 11,491 | 2,492 | 21.7 | 452 | 3.9 | 1,046 | 9.1 | 471 | 4.1 | 276 | 2.4 | 2,054 | 17.9 | 977 | 8.5 | 3,723 | 32.4 |
| Doctoral students | | | | | | | | | | | | | | | | | |
| 2017new[d] | 57,183 | 5,567 | 9.7 | 3,989 | 7.0 | 18,631 | 32.6 | 1,409 | 2.5 | 1,532 | 2.7 | 18,734 | 32.8 | 1,453 | 2.5 | 5,868 | 10.3 |
| 2018 | 59,270 | 5,255 | 8.9 | 4,156 | 7.0 | 18,928 | 31.9 | 2,303 | 3.9 | 1,599 | 2.7 | 19,551 | 33.0 | 1,560 | 2.6 | 5,918 | 10.0 |
| 2019 | 62,114 | 6,003 | 9.7 | 4,667 | 7.5 | 19,979 | 32.2 | 2,027 | 3.3 | 1,781 | 2.9 | 19,747 | 31.8 | 1,603 | 2.6 | 6,307 | 10.2 |

NA = not available; USDA was added in 1985, NASA was added in 1996, and DOE was added in 1999.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[d] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**
Percentages may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-8

## Primary mechanism of support for full-time graduate students in science, engineering, and health: 1975–2019

(Number and percent)

| Year | Total | Fellowships | | Research assistantships | | Teaching assistantships | | Traineeships | | Other types of support | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Self-support | | Other | |
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 1975 | 219,648 | 37,163 | 16.9 | 39,964 | 18.2 | 47,156 | 21.5 | na | na | 79,860 | 36.4 | 15,505 | 7.1 |
| 1976 | 223,412 | 36,200 | 16.2 | 42,555 | 19.0 | 48,124 | 21.5 | na | na | 74,428 | 33.3 | 22,105 | 9.9 |
| 1977 | 226,738 | 37,679 | 16.6 | 43,657 | 19.3 | 48,481 | 21.4 | na | na | 74,173 | 32.7 | 22,748 | 10.0 |
| 1978[a] | 223,030 | na | na | na | na | na | na | na | na | 69,920 | 31.4 | 153,110 | 68.6 |
| 1979 | 231,760 | 20,214 | 8.7 | 48,976 | 21.1 | 51,779 | 22.3 | 17,965 | 7.8 | 73,849 | 31.9 | 18,977 | 8.2 |
| 1980 | 238,416 | 20,515 | 8.6 | 51,566 | 21.6 | 53,889 | 22.6 | 17,545 | 7.4 | 75,457 | 31.6 | 19,444 | 8.2 |
| 1981 | 242,049 | 20,095 | 8.3 | 52,711 | 21.8 | 55,745 | 23.0 | 16,771 | 6.9 | 76,522 | 31.6 | 20,205 | 8.3 |
| 1982 | 244,757 | 20,855 | 8.5 | 52,580 | 21.5 | 58,334 | 23.8 | 14,637 | 6.0 | 77,896 | 31.8 | 20,455 | 8.4 |
| 1983 | 252,017 | 21,342 | 8.5 | 54,904 | 21.8 | 60,071 | 23.8 | 13,512 | 5.4 | 81,233 | 32.2 | 20,955 | 8.3 |
| 1984 | 253,922 | 21,624 | 8.5 | 57,735 | 22.7 | 61,256 | 24.1 | 13,465 | 5.3 | 79,150 | 31.2 | 20,692 | 8.1 |
| 1985 | 257,287 | 22,540 | 8.8 | 60,995 | 23.7 | 61,822 | 24.0 | 13,665 | 5.3 | 77,630 | 30.2 | 20,635 | 8.0 |
| 1986 | 266,168 | 22,954 | 8.6 | 66,010 | 24.8 | 62,552 | 23.5 | 13,526 | 5.1 | 78,880 | 29.6 | 22,246 | 8.4 |
| 1987 | 271,056 | 21,953 | 8.1 | 70,214 | 25.9 | 62,847 | 23.2 | 14,096 | 5.2 | 79,780 | 29.4 | 22,166 | 8.2 |
| 1988 | 275,127 | 22,353 | 8.1 | 74,588 | 27.1 | 63,053 | 22.9 | 14,397 | 5.2 | 79,160 | 28.8 | 21,576 | 7.8 |
| 1989 | 282,648 | 23,450 | 8.3 | 79,045 | 28.0 | 64,296 | 22.7 | 14,524 | 5.1 | 80,251 | 28.4 | 21,082 | 7.5 |
| 1990 | 292,782 | 25,254 | 8.6 | 80,746 | 27.6 | 64,950 | 22.2 | 15,198 | 5.2 | 84,384 | 28.8 | 22,250 | 7.6 |
| 1991 | 307,010 | 26,695 | 8.7 | 85,175 | 27.7 | 65,214 | 21.2 | 15,403 | 5.0 | 91,583 | 29.8 | 22,940 | 7.5 |
| 1992 | 322,555 | 28,627 | 8.9 | 88,030 | 27.3 | 65,702 | 20.4 | 15,361 | 4.8 | 101,299 | 31.4 | 23,536 | 7.3 |
| 1993 | 329,644 | 29,132 | 8.8 | 90,154 | 27.3 | 67,290 | 20.4 | 15,445 | 4.7 | 106,276 | 32.2 | 21,347 | 6.5 |
| 1994 | 332,088 | 28,892 | 8.7 | 92,008 | 27.7 | 66,844 | 20.1 | 15,681 | 4.7 | 107,035 | 32.2 | 21,628 | 6.5 |
| 1995 | 329,283 | 28,887 | 8.8 | 89,946 | 27.3 | 65,976 | 20.0 | 15,943 | 4.8 | 106,687 | 32.4 | 21,844 | 6.6 |
| 1996 | 328,536 | 28,862 | 8.8 | 87,694 | 26.7 | 65,756 | 20.0 | 15,481 | 4.7 | 109,475 | 33.3 | 21,268 | 6.5 |
| 1997 | 327,289 | 28,956 | 8.8 | 88,001 | 26.9 | 65,425 | 20.0 | 14,488 | 4.4 | 108,741 | 33.2 | 21,678 | 6.6 |
| 1998 | 327,389 | 29,106 | 8.9 | 88,097 | 26.9 | 65,173 | 19.9 | 14,946 | 4.6 | 108,224 | 33.1 | 21,843 | 6.7 |
| 1999 | 334,423 | 30,112 | 9.0 | 91,279 | 27.3 | 66,294 | 19.8 | 14,707 | 4.4 | 109,416 | 32.7 | 22,615 | 6.8 |
| 2000 | 341,283 | 31,330 | 9.2 | 94,323 | 27.6 | 66,423 | 19.5 | 14,171 | 4.2 | 112,432 | 32.9 | 22,604 | 6.6 |
| 2001 | 354,522 | 32,270 | 9.1 | 99,923 | 28.2 | 68,267 | 19.3 | 14,154 | 4.0 | 116,636 | 32.9 | 23,272 | 6.6 |
| 2002 | 378,991 | 34,849 | 9.2 | 108,185 | 28.5 | 70,732 | 18.7 | 15,006 | 4.0 | 126,654 | 33.4 | 23,565 | 6.2 |
| 2003 | 397,420 | 34,460 | 8.7 | 114,256 | 28.7 | 73,105 | 18.4 | 15,126 | 3.8 | 134,730 | 33.9 | 25,743 | 6.5 |
| 2004 | 402,573 | 35,034 | 8.7 | 114,768 | 28.5 | 73,009 | 18.1 | 14,903 | 3.7 | 137,078 | 34.1 | 27,781 | 6.9 |
| 2005 | 406,620 | 36,414 | 9.0 | 114,304 | 28.1 | 74,238 | 18.3 | 14,570 | 3.6 | 139,403 | 34.3 | 27,691 | 6.8 |
| 2006 | 419,015 | 36,689 | 8.8 | 114,774 | 27.4 | 75,911 | 18.1 | 14,571 | 3.5 | 146,606 | 35.0 | 30,464 | 7.3 |
| 2007old[b] | 430,860 | 38,340 | 8.9 | 115,192 | 26.7 | 77,817 | 18.1 | 13,437 | 3.1 | 154,293 | 35.8 | 31,781 | 7.4 |
| 2007new[b] | 437,365 | 38,631 | 8.8 | 116,043 | 26.5 | 79,948 | 18.3 | 13,497 | 3.1 | 157,029 | 35.9 | 32,217 | 7.4 |
| 2008 | 449,613 | 38,599 | 8.6 | 118,349 | 26.3 | 83,135 | 18.5 | 13,317 | 3.0 | 165,658 | 36.8 | 30,555 | 6.8 |
| 2009 | 456,115 | 38,931 | 8.5 | 121,443 | 26.6 | 81,828 | 17.9 | 12,830 | 2.8 | 169,956 | 37.3 | 31,127 | 6.8 |
| 2010 | 461,185 | 39,899 | 8.7 | 123,698 | 26.8 | 83,252 | 18.1 | 12,476 | 2.7 | 170,564 | 37.0 | 31,296 | 6.8 |
| 2011 | 457,292 | 41,297 | 9.0 | 122,480 | 26.8 | 84,173 | 18.4 | 12,629 | 2.8 | 165,807 | 36.3 | 30,906 | 6.8 |
| 2012 | 459,498 | 42,005 | 9.1 | 119,347 | 26.0 | 86,295 | 18.8 | 11,646 | 2.5 | 166,900 | 36.3 | 33,305 | 7.2 |
| 2013 | 468,953 | 43,432 | 9.3 | 116,377 | 24.8 | 88,689 | 18.9 | 10,514 | 2.2 | 176,788 | 37.7 | 33,153 | 7.1 |
| 2014old[c] | 484,880 | 42,804 | 8.8 | 115,274 | 23.8 | 90,564 | 18.7 | 11,207 | 2.3 | 191,148 | 39.4 | 33,883 | 7.0 |
| 2014new[c] | 492,170 | 43,084 | 8.8 | 115,700 | 23.5 | 90,947 | 18.5 | 11,251 | 2.3 | 196,687 | 40.0 | 34,501 | 7.0 |
| 2015 | 506,262 | 43,460 | 8.6 | 116,425 | 23.0 | 92,513 | 18.3 | 11,175 | 2.2 | 205,678 | 40.6 | 37,011 | 7.3 |
| 2016 | 508,773 | 42,584 | 8.4 | 116,222 | 22.8 | 91,545 | 18.0 | 11,833 | 2.3 | 208,182 | 40.9 | 38,407 | 7.5 |
| 2017old[d] | 498,619 | 42,120 | 8.4 | 110,408 | 22.1 | 91,615 | 18.4 | 12,380 | 2.5 | 200,850 | 40.3 | 41,246 | 8.3 |
| 2017new[d] | 480,788 | 41,408 | 8.6 | 108,633 | 22.6 | 88,323 | 18.4 | 12,249 | 2.5 | 190,693 | 39.7 | 39,482 | 8.2 |
| 2018 | 491,449 | 41,779 | 8.5 | 111,469 | 22.7 | 87,682 | 17.8 | 12,896 | 2.6 | 196,114 | 39.9 | 41,509 | 8.4 |
| 2019 | 502,442 | 45,834 | 9.1 | 115,320 | 23.0 | 88,144 | 17.5 | 12,282 | 2.4 | 199,077 | 39.6 | 41,785 | 8.3 |

TABLE 1-8

## Primary mechanism of support for full-time graduate students in science, engineering, and health: 1975–2019

(Number and percent)

| Year | Total | Fellowships | | Research assistantships | | Teaching assistantships | | Traineeships | | Other types of support | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Self-support | | Other | |
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Master's students | | | | | | | | | | | | | |
| 2017new[d] | 245,010 | 6,535 | 2.7 | 21,681 | 8.8 | 24,193 | 9.9 | 1,992 | 0.8 | 165,485 | 67.5 | 25,124 | 10.3 |
| 2018 | 248,552 | 6,880 | 2.8 | 20,147 | 8.1 | 22,636 | 9.1 | 2,253 | 0.9 | 171,930 | 69.2 | 24,706 | 9.9 |
| 2019 | 254,532 | 7,717 | 3.0 | 20,406 | 8.0 | 23,284 | 9.1 | 2,185 | 0.9 | 176,457 | 69.3 | 24,483 | 9.6 |
| Doctoral students | | | | | | | | | | | | | |
| 2017new[d] | 235,778 | 34,873 | 14.8 | 86,952 | 36.9 | 64,130 | 27.2 | 10,257 | 4.4 | 25,208 | 10.7 | 14,358 | 6.1 |
| 2018 | 242,897 | 34,899 | 14.4 | 91,322 | 37.6 | 65,046 | 26.8 | 10,643 | 4.4 | 24,184 | 10.0 | 16,803 | 6.9 |
| 2019 | 247,910 | 38,117 | 15.4 | 94,914 | 38.3 | 64,860 | 26.2 | 10,097 | 4.1 | 22,620 | 9.1 | 17,302 | 7.0 |

na = not applicable.

[a] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

[d] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended.

**Note(s):**

Percentages may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-9a

## Graduate students in science broad fields: 1975–2019

(Number)

| Year | Total | Agricultural sciences[a] | Biological and biomedical sciences[a] | Communication[a,b,c] | Computer and information sciences | Family and consumer sciences and human sciences[a,b,c] | Geosciences, atmospheric sciences, and ocean sciences | Mathematics and statistics | Multidisciplinary and interdisciplinary studies[a,c] | Natural resources and conservation[a] | Neurobiology and neuroscience[a,c] | Physical sciences[a] | Psychology[d] | Social sciences[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1975 | 234,649 | 10,804 | 46,185 | ne | 8,415 | ne | 12,079 | 16,892 | ne | NA | NA | 26,310 | 36,191 | 77,773 |
| 1976 | 238,675 | 11,427 | 47,453 | ne | 8,627 | ne | 12,809 | 17,071 | ne | NA | NA | 26,641 | 37,458 | 77,189 |
| 1977 | 242,932 | 11,812 | 48,975 | ne | 9,108 | ne | 13,446 | 16,052 | ne | NA | NA | 26,864 | 38,617 | 78,058 |
| 1978[e] | 236,465 | 11,981 | 47,665 | ne | 9,847 | ne | 13,268 | 14,812 | ne | NA | NA | 26,282 | 37,522 | 75,088 |
| 1979 | 247,235 | 12,365 | 47,932 | ne | 11,690 | ne | 13,731 | 15,031 | ne | NA | NA | 26,701 | 39,766 | 80,019 |
| 1980 | 251,265 | 12,689 | 47,261 | ne | 13,578 | ne | 14,051 | 15,311 | ne | NA | NA | 26,934 | 40,610 | 80,831 |
| 1981 | 252,404 | 12,585 | 46,302 | ne | 16,437 | ne | 14,263 | 15,881 | ne | NA | NA | 27,360 | 40,666 | 78,910 |
| 1982 | 255,146 | 12,826 | 45,627 | ne | 19,812 | ne | 15,018 | 17,157 | ne | NA | NA | 28,188 | 40,073 | 76,445 |
| 1983 | 255,820 | 12,728 | 45,253 | ne | 23,333 | ne | 15,443 | 17,358 | ne | NA | NA | 29,463 | 40,905 | 71,337 |
| 1984 | 256,903 | 12,528 | 45,353 | ne | 25,526 | ne | 15,500 | 17,443 | ne | NA | NA | 30,061 | 40,931 | 69,561 |
| 1985 | 261,973 | 11,846 | 45,709 | ne | 29,769 | ne | 15,414 | 17,563 | ne | NA | NA | 30,987 | 40,721 | 69,964 |
| 1986 | 266,077 | 11,771 | 46,302 | ne | 31,349 | ne | 15,053 | 17,949 | ne | NA | NA | 32,259 | 41,241 | 70,153 |
| 1987 | 269,256 | 11,405 | 46,317 | ne | 32,051 | ne | 14,357 | 18,508 | ne | NA | NA | 32,741 | 42,612 | 71,265 |
| 1988 | 272,309 | 11,438 | 47,126 | ne | 32,227 | ne | 13,854 | 19,077 | ne | NA | NA | 32,975 | 43,963 | 71,649 |
| 1989 | 278,577 | 11,461 | 48,449 | ne | 32,482 | ne | 13,630 | 19,247 | ne | NA | NA | 33,629 | 45,528 | 74,151 |
| 1990 | 289,383 | 11,563 | 49,602 | ne | 34,257 | ne | 13,977 | 19,774 | ne | NA | NA | 34,082 | 48,167 | 77,961 |
| 1991 | 299,057 | 11,766 | 51,365 | ne | 34,681 | ne | 14,466 | 19,952 | ne | NA | NA | 34,724 | 51,343 | 80,760 |
| 1992 | 312,478 | 12,153 | 53,693 | ne | 36,325 | ne | 15,324 | 20,355 | ne | NA | NA | 35,357 | 53,484 | 85,787 |
| 1993 | 318,851 | 12,305 | 55,950 | ne | 36,213 | ne | 15,721 | 20,000 | ne | NA | NA | 35,328 | 54,557 | 88,777 |
| 1994 | 318,118 | 12,611 | 57,676 | ne | 34,158 | ne | 15,957 | 19,573 | ne | NA | NA | 34,466 | 54,554 | 89,123 |
| 1995 | 315,265 | 12,768 | 58,344 | ne | 33,458 | ne | 15,716 | 18,504 | ne | NA | NA | 33,399 | 53,641 | 89,435 |
| 1996 | 311,957 | 12,301 | 57,749 | ne | 34,626 | ne | 15,183 | 18,008 | ne | NA | NA | 32,333 | 53,122 | 88,635 |
| 1997 | 306,482 | 12,203 | 56,705 | ne | 35,991 | ne | 14,548 | 16,719 | ne | NA | NA | 31,105 | 53,126 | 86,085 |
| 1998 | 304,818 | 12,168 | 56,695 | ne | 38,027 | ne | 14,258 | 16,485 | ne | NA | NA | 30,575 | 52,557 | 84,053 |
| 1999 | 309,491 | 12,312 | 56,959 | ne | 42,478 | ne | 14,083 | 16,257 | ne | NA | NA | 30,691 | 51,727 | 84,984 |
| 2000 | 309,424 | 12,023 | 56,282 | ne | 47,350 | ne | 13,941 | 15,650 | ne | NA | NA | 30,385 | 50,466 | 83,327 |
| 2001 | 319,736 | 12,235 | 57,639 | ne | 52,196 | ne | 13,841 | 16,651 | ne | NA | NA | 31,038 | 50,454 | 85,682 |
| 2002 | 335,166 | 12,698 | 61,088 | ne | 55,269 | ne | 14,240 | 18,163 | ne | NA | NA | 32,341 | 51,152 | 90,215 |
| 2003 | 347,268 | 13,197 | 64,701 | ne | 53,696 | ne | 14,620 | 19,465 | ne | NA | NA | 34,298 | 52,162 | 95,129 |
| 2004 | 352,307 | 13,445 | 66,565 | ne | 50,016 | ne | 15,131 | 19,931 | ne | NA | NA | 35,761 | 54,126 | 97,332 |
| 2005 | 357,710 | 13,123 | 68,479 | ne | 47,978 | ne | 14,836 | 20,210 | ne | NA | NA | 36,375 | 57,282 | 99,427 |
| 2006 | 363,246 | 13,016 | 69,941 | ne | 47,653 | ne | 14,920 | 20,815 | ne | NA | NA | 36,901 | 57,653 | 102,347 |
| 2007old[c] | 372,120 | 13,222 | 71,663 | ne | 48,959 | ne | 14,675 | 21,335 | ne | NA | NA | 37,111 | 60,284 | 104,871 |
| 2007new[c] | 384,523 | 13,528 | 71,932 | 7,303 | 48,246 | 2,780 | 14,100 | 20,975 | 4,484 | NA | 1,584 | 36,824 | 59,617 | 103,150 |
| 2008 | 391,419 | 14,153 | 72,666 | 8,444 | 49,553 | 3,549 | 14,389 | 21,400 | 5,559 | NA | 2,012 | 37,319 | 58,991 | 103,384 |

TABLE 1-9a

## Graduate students in science broad fields: 1975–2019

(Number)

| Year | Total | Agricultural sciences[a] | Biological and biomedical sciences[a] | Communication[a,b,c] | Computer and information sciences | Family and consumer sciences and human sciences[a,b,c] | Geosciences, atmospheric sciences, and ocean sciences | Mathematics and statistics | Multidisciplinary and interdisciplinary studies[a,c] | Natural resources and conservation[a] | Neurobiology and neuroscience[a,c] | Physical sciences[a] | Psychology[d] | Social sciences[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009 | 401,008 | 15,200 | 73,304 | 9,418 | 51,161 | 3,794 | 14,839 | 22,226 | 6,557 | NA | 2,356 | 38,149 | 56,184 | 107,820 |
| 2010 | 407,291 | 15,656 | 74,928 | 9,825 | 51,546 | 4,191 | 15,655 | 23,136 | 7,944 | NA | 2,798 | 38,973 | 53,419 | 109,220 |
| 2011 | 414,440 | 16,129 | 75,423 | 11,029 | 51,234 | 4,509 | 15,820 | 23,801 | 6,537 | NA | 4,117 | 39,694 | 54,486 | 111,661 |
| 2012 | 413,033 | 16,234 | 76,447 | 11,010 | 51,789 | 4,110 | 16,069 | 24,575 | 6,038 | NA | 4,547 | 39,928 | 54,117 | 108,169 |
| 2013 | 417,251 | 16,429 | 76,649 | 11,114 | 56,339 | 4,014 | 15,816 | 24,804 | 5,892 | NA | 4,795 | 40,019 | 54,102 | 107,278 |
| 2014old[f] | 425,148 | 16,947 | 76,029 | 11,382 | 68,766 | 4,180 | 15,423 | 25,502 | 6,417 | NA | 4,923 | 40,196 | 50,938 | 104,445 |
| 2014new[f] | 437,395 | 17,505 | 78,490 | 11,942 | 76,546 | 4,302 | 15,710 | 25,874 | 7,196 | NA | 4,923 | 40,332 | 48,833 | 105,742 |
| 2015 | 448,654 | 18,610 | 80,096 | 11,759 | 86,192 | 4,134 | 15,447 | 26,444 | 8,138 | NA | 5,002 | 40,386 | 49,740 | 102,706 |
| 2016 | 452,046 | 18,284 | 79,146 | 12,347 | 92,650 | 3,750 | 15,015 | 28,050 | 9,251 | NA | 5,226 | 40,518 | 47,609 | 100,200 |
| 2017old[a] | 450,343 | 17,674 | 82,603 | 11,983 | 90,657 | 3,709 | 14,430 | 28,990 | 9,934 | NA | 5,457 | 41,081 | 49,896 | 93,929 |
| 2017new[a] | 415,568 | 9,347 | 85,217 | ne | 89,909 | ne | 12,545 | 29,669 | 9,854 | 10,879 | NA | 41,829 | 50,033 | 76,286 |
| 2018 | 432,255 | 9,538 | 87,933 | ne | 93,478 | ne | 12,333 | 31,461 | 10,338 | 11,407 | NA | 42,075 | 55,707 | 77,985 |
| 2019 | 453,691 | 9,518 | 91,993 | ne | 101,284 | ne | 11,878 | 33,159 | 11,181 | 11,743 | NA | 42,867 | 61,069 | 78,999 |
| Master's students | | | | | | | | | | | | | | |
| 2017new[a] | 229,169 | 5,603 | 33,926 | ne | 75,618 | ne | 6,006 | 16,568 | 6,923 | 7,311 | NA | 6,368 | 29,638 | 41,208 |
| 2018 | 241,327 | 5,658 | 35,306 | ne | 77,351 | ne | 5,629 | 18,073 | 7,414 | 7,691 | NA | 6,075 | 35,404 | 42,726 |
| 2019 | 259,795 | 5,629 | 38,078 | ne | 84,092 | ne | 5,327 | 19,594 | 8,203 | 8,066 | NA | 6,361 | 40,838 | 43,607 |
| Doctoral students | | | | | | | | | | | | | | |
| 2017new[a] | 186,399 | 3,744 | 51,291 | ne | 14,291 | ne | 6,539 | 13,101 | 2,931 | 3,568 | NA | 35,461 | 20,395 | 35,078 |
| 2018 | 190,928 | 3,880 | 52,627 | ne | 16,127 | ne | 6,704 | 13,388 | 2,924 | 3,716 | NA | 36,000 | 20,303 | 35,259 |
| 2019 | 193,896 | 3,889 | 53,915 | ne | 17,192 | ne | 6,551 | 13,565 | 2,978 | 3,677 | NA | 36,506 | 20,231 | 35,392 |

NA = not available; these fields were collected as part of other fields in other years (see footnotes a and c). ne = not eligible; the fields collected have changed over time.

[a] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Redesign includes the following: natural resources splitting from agricultural sciences; neurosciences being reported under biological and biomedical sciences; human development being reported under psychology; physical sciences adding materials sciences; social sciences no longer including public administration; and multidisciplinary and interdisciplinary studies no longer including nanoscience; and communications as well as family and consumer sciences were removed.

[b] The field communications and the field family and consumer sciences and human sciences were added as part of the 2007 field eligibility changes. These fields were dropped in 2017 to align the GSS with other NCSES surveys.

[c] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. The science field communication and the science field family and consumer sciences and human sciences were newly eligible in 2007; data for these two fields begin in 2007new. The science field multidisciplinary and interdisciplinary studies was also added to the GSS code list in 2007; some data reported in this field were reported under other fields before 2007 and are included in those fields in 2007old. neuroscience is reported as a separate field of science in 2007new; data were reported under health field neurology in 2007old and previous years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[d] Beginning in 2008, more rigorous follow-up was done with institutions regarding the exclusion of practitioner-oriented graduate degree programs in psychology. This change may affect interpretation of trends in this field. This follow-up was discontinued in 2017.

[e] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[f] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

**Note(s):**
Sum of the broad fields may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-9b

## Postdoctoral appointees in science broad fields: 1979–2019

(Number)

| Year | Total | Agricultural sciences[a] | Biological and biomedical sciences[a] | Communication[a,b,c] | Computer and information sciences | Family and consumer sciences and human sciences[a,b,c] | Geosciences, atmospheric sciences, and ocean sciences | Mathematics and statistics | Multidisciplinary and interdisciplinary studies[a,c] | Natural resources and conservation[a] | Neurobiology and neuroscience[a,c] | Physical sciences[a] | Psychology[d] | Social sciences[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1979 | 12,519 | 228 | 6,866 | ne | 38 | ne | 315 | 162 | ne | NA | NA | 4,056 | 454 | 400 |
| 1980 | 13,042 | 259 | 7,083 | ne | 43 | ne | 312 | 162 | ne | NA | NA | 4,279 | 475 | 429 |
| 1981 | 13,731 | 292 | 7,678 | ne | 35 | ne | 346 | 113 | ne | NA | NA | 4,477 | 471 | 319 |
| 1982 | 13,698 | 302 | 7,713 | ne | 47 | ne | 340 | 194 | ne | NA | NA | 4,298 | 520 | 284 |
| 1983 | 14,562 | 318 | 8,337 | ne | 80 | ne | 420 | 170 | ne | NA | NA | 4,458 | 437 | 342 |
| 1984 | 14,979 | 384 | 8,683 | ne | 59 | ne | 493 | 203 | ne | NA | NA | 4,408 | 423 | 326 |
| 1985 | 15,576 | 374 | 9,128 | ne | 70 | ne | 379 | 226 | ne | NA | NA | 4,539 | 510 | 350 |
| 1986 | 16,512 | 421 | 9,692 | ne | 75 | ne | 420 | 201 | ne | NA | NA | 4,860 | 521 | 322 |
| 1987 | 17,369 | 453 | 10,353 | ne | 103 | ne | 424 | 229 | ne | NA | NA | 4,968 | 460 | 379 |
| 1988 | 18,024 | 476 | 10,653 | ne | 96 | ne | 496 | 284 | ne | NA | NA | 5,201 | 498 | 320 |
| 1989 | 18,978 | 522 | 11,425 | ne | 84 | ne | 453 | 225 | ne | NA | NA | 5,366 | 536 | 367 |
| 1990 | 19,853 | 536 | 11,909 | ne | 71 | ne | 594 | 249 | ne | NA | NA | 5,592 | 464 | 438 |
| 1991 | 20,595 | 580 | 12,455 | ne | 120 | ne | 625 | 206 | ne | NA | NA | 5,722 | 508 | 379 |
| 1992 | 21,514 | 640 | 13,158 | ne | 145 | ne | 692 | 201 | ne | NA | NA | 5,792 | 525 | 361 |
| 1993 | 22,219 | 720 | 13,778 | ne | 164 | ne | 765 | 224 | ne | NA | NA | 5,669 | 521 | 378 |
| 1994 | 23,181 | 729 | 14,379 | ne | 185 | ne | 824 | 239 | ne | NA | NA | 5,884 | 551 | 390 |
| 1995 | 23,512 | 724 | 14,659 | ne | 213 | ne | 845 | 262 | ne | NA | NA | 5,851 | 582 | 376 |
| 1996 | 23,892 | 699 | 14,890 | ne | 250 | ne | 861 | 326 | ne | NA | NA | 5,828 | 594 | 444 |
| 1997 | 24,293 | 724 | 15,082 | ne | 322 | ne | 942 | 308 | ne | NA | NA | 5,968 | 586 | 361 |
| 1998 | 25,023 | 695 | 15,761 | ne | 374 | ne | 902 | 279 | ne | NA | NA | 6,004 | 617 | 391 |
| 1999 | 25,784 | 750 | 16,097 | ne | 334 | ne | 925 | 351 | ne | NA | NA | 6,157 | 716 | 454 |
| 2000 | 26,911 | 822 | 16,734 | ne | 344 | ne | 1,155 | 385 | ne | NA | NA | 6,270 | 730 | 471 |
| 2001 | 27,044 | 833 | 17,032 | ne | 336 | ne | 1,049 | 353 | ne | NA | NA | 6,223 | 809 | 409 |
| 2002 | 28,371 | 963 | 17,640 | ne | 356 | ne | 1,129 | 395 | ne | NA | NA | 6,619 | 815 | 454 |
| 2003 | 29,856 | 1,054 | 18,625 | ne | 355 | ne | 1,182 | 449 | ne | NA | NA | 6,829 | 960 | 402 |
| 2004 | 30,116 | 959 | 18,716 | ne | 384 | ne | 1,263 | 468 | ne | NA | NA | 7,059 | 902 | 365 |
| 2005 | 30,290 | 1,007 | 18,747 | ne | 406 | ne | 1,364 | 500 | ne | NA | NA | 7,011 | 884 | 371 |
| 2006 | 30,245 | 927 | 18,807 | ne | 467 | ne | 1,495 | 579 | ne | NA | NA | 6,703 | 873 | 394 |
| 2007old[c] | 30,986 | 948 | 19,218 | ne | 516 | ne | 1,322 | 621 | ne | NA | NA | 6,760 | 1,106 | 495 |
| 2007new[c] | 31,281 | 985 | 19,109 | 30 | 456 | 8 | 1,250 | 624 | 244 | NA | 285 | 6,719 | 1,088 | 483 |
| 2008 | 32,741 | 1,147 | 19,827 | 32 | 493 | 19 | 1,339 | 723 | 348 | NA | 343 | 6,885 | 1,077 | 508 |
| 2009 | 34,388 | 1,083 | 20,159 | 38 | 594 | 22 | 1,424 | 737 | 459 | NA | 645 | 7,447 | 1,219 | 561 |
| 2010[e,f] | 37,351 | 1,190 | 21,726 | 62 | 763 | 30 | 1,740 | 791 | 785 | NA | 838 | 7,583 | 1,132 | 711 |
| 2011[f] | 37,335 | 1,256 | 21,107 | 67 | 759 | 52 | 1,774 | 830 | 704 | NA | 1,398 | 7,490 | 1,124 | 774 |
| 2012 | 36,738 | 1,290 | 20,086 | 58 | 760 | 58 | 1,956 | 902 | 742 | NA | 1,525 | 7,430 | 1,132 | 799 |

TABLE 1-9b

## Postdoctoral appointees in science broad fields: 1979–2019

(Number)

| Year | Total | Agricultural sciences[a] | Biological and biomedical sciences[a] | Communication[a,b,c] | Computer and information sciences | Family and consumer sciences and human sciences[a,b,c] | Geosciences, atmospheric sciences, and ocean sciences | Mathematics and statistics | Multidisciplinary and interdisciplinary studies[a,c] | Natural resources and conservation[a] | Neurobiology and neuroscience[a,c] | Physical sciences[a] | Psychology[d] | Social sciences[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2013 | 36,289 | 1,319 | 19,330 | 76 | 765 | 90 | 2,032 | 932 | 891 | NA | 1,696 | 7,197 | 1,023 | 938 |
| 2014old[g] | 36,184 | 1,395 | 18,749 | 75 | 833 | 93 | 2,059 | 956 | 1,045 | NA | 1,778 | 7,089 | 1,062 | 1,050 |
| 2014new[g] | 37,316 | 1,402 | 19,554 | 75 | 834 | 114 | 2,061 | 959 | 1,045 | NA | 1,878 | 7,277 | 1,066 | 1,051 |
| 2015 | 37,639 | 1,525 | 19,304 | 83 | 888 | 103 | 2,129 | 1,011 | 972 | NA | 1,957 | 7,358 | 1,130 | 1,179 |
| 2016 | 37,941 | 1,484 | 19,427 | 86 | 914 | 116 | 2,104 | 1,005 | 1,095 | NA | 2,071 | 7,269 | 1,177 | 1,193 |
| 2017old[a] | 37,816 | 1,620 | 19,506 | 89 | 856 | 163 | 2,136 | 966 | 1,126 | NA | 2,109 | 6,946 | 1,072 | 1,227 |
| 2017new[a] | 38,241 | 1,024 | 21,781 | ne | 854 | ne | 2,089 | 991 | 1,131 | 731 | NA | 7,211 | 1,082 | 1,347 |
| 2018 | 37,564 | 1,072 | 21,533 | ne | 879 | ne | 1,726 | 982 | 980 | 764 | NA | 6,976 | 1,145 | 1,507 |
| 2019 | 38,503 | 1,079 | 21,847 | ne | 878 | ne | 1,778 | 1,070 | 972 | 806 | NA | 7,159 | 1,152 | 1,762 |

NA = not available; these fields were collected as part of other fields in other years (see footnotes a and c). ne = not eligible; the fields collected have changed over time.

[a] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Redesign includes the following: natural resources splitting from agricultural sciences; neurosciences being reported under biological and biomedical sciences; human development being reported under psychology; physical sciences adding materials sciences; and social sciences no longer including public administration; and multidisciplinary no longer including nanoscience.

[b] The field communications and the field family and consumer sciences and human sciences were added as part of the 2007 field eligibility changes. These fields were dropped in 2017 to align the GSS with other NCSES surveys.

[c] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. The science field communication and the science field family and consumer sciences and human sciences were newly eligible in 2007; data for these two fields begin in 2007new. The science field multidisciplinary and interdisciplinary studies was also added to the GSS code list in 2007; some data reported in this field were reported under other fields before 2007 and are included in those fields in 2007old. neuroscience is reported as a separate field of science in 2007new; data were reported under health field neurology in 2007old and previous years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[d] Beginning in 2008, more rigorous follow-up was done with institutions regarding the exclusion of practitioner-oriented graduate degree programs in psychology. This change may affect interpretation of trends in this field. This follow-up was discontinued in 2017.

[e] In 2010, the postdoctoral (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[f] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[g] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

**Note(s):**

"Field" refers to the field of the unit that reports postdocs to the GSS. Sum of the broad fields may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-9c

## Doctorate-holding nonfaculty researchers in science broad fields: 1979–2019

(Number)

| Year | Total | Agricultural sciences[a] | Biological and biomedical sciences[a] | Communication[a,b,c] | Computer and information sciences | Family and consumer sciences and human sciences[a,b,c] | Geosciences, atmospheric sciences, and ocean sciences | Mathematics and statistics | Multidisciplinary and interdisciplinary studies[a,c] | Natural resources and conservation[a] | Neurobiology and neuroscience[a,c] | Physical sciences[a] | Psychology[d] | Social sciences[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1979 | 1,915 | 58 | 932 | ne | 44 | ne | 104 | 69 | ne | NA | NA | 464 | 63 | 181 |
| 1980 | 2,184 | 74 | 1,100 | ne | 51 | ne | 154 | 84 | ne | NA | NA | 475 | 103 | 143 |
| 1981 | 2,445 | 68 | 1,055 | ne | 57 | ne | 143 | 112 | ne | NA | NA | 632 | 156 | 222 |
| 1982 | 2,809 | 79 | 1,267 | ne | 47 | ne | 239 | 82 | ne | NA | NA | 809 | 150 | 136 |
| 1983 | 3,348 | 179 | 1,566 | ne | 61 | ne | 309 | 125 | ne | NA | NA | 759 | 158 | 191 |
| 1984 | 3,442 | 142 | 1,611 | ne | 58 | ne | 245 | 125 | ne | NA | NA | 856 | 221 | 184 |
| 1985 | 3,529 | 125 | 1,638 | ne | 78 | ne | 186 | 176 | ne | NA | NA | 967 | 210 | 149 |
| 1986 | 3,356 | 155 | 1,582 | ne | 97 | ne | 193 | 54 | ne | NA | NA | 924 | 216 | 135 |
| 1987 | 3,250 | 118 | 1,545 | ne | 123 | ne | 202 | 70 | ne | NA | NA | 848 | 256 | 88 |
| 1988 | 3,348 | 118 | 1,608 | ne | 98 | ne | 200 | 89 | ne | NA | NA | 960 | 174 | 101 |
| 1989 | 3,470 | 150 | 1,709 | ne | 68 | ne | 228 | 65 | ne | NA | NA | 991 | 180 | 79 |
| 1990 | 3,745 | 192 | 1,743 | ne | 61 | ne | 315 | 92 | ne | NA | NA | 1,006 | 198 | 138 |
| 1991 | 3,872 | 210 | 1,846 | ne | 50 | ne | 298 | 86 | ne | NA | NA | 1,007 | 192 | 183 |
| 1992 | 3,660 | 200 | 1,688 | ne | 42 | ne | 304 | 71 | ne | NA | NA | 1,071 | 152 | 132 |
| 1993 | 4,003 | 174 | 1,838 | ne | 67 | ne | 340 | 53 | ne | NA | NA | 1,225 | 171 | 135 |
| 1994 | 4,156 | 256 | 1,841 | ne | 49 | ne | 363 | 72 | ne | NA | NA | 1,244 | 203 | 128 |
| 1995 | 4,395 | 234 | 1,950 | ne | 66 | ne | 421 | 93 | ne | NA | NA | 1,381 | 146 | 104 |
| 1996 | 4,426 | 210 | 1,905 | ne | 107 | ne | 431 | 88 | ne | NA | NA | 1,291 | 232 | 162 |
| 1997 | 4,408 | 203 | 1,984 | ne | 87 | ne | 431 | 92 | ne | NA | NA | 1,208 | 225 | 178 |
| 1998 | 4,497 | 159 | 2,238 | ne | 125 | ne | 415 | 88 | ne | NA | NA | 1,083 | 252 | 137 |
| 1999 | 4,761 | 168 | 2,331 | ne | 133 | ne | 436 | 122 | ne | NA | NA | 1,157 | 250 | 164 |
| 2000 | 4,931 | 219 | 2,245 | ne | 153 | ne | 486 | 80 | ne | NA | NA | 1,271 | 326 | 151 |
| 2001 | 4,707 | 229 | 2,323 | ne | 150 | ne | 477 | 54 | ne | NA | NA | 1,081 | 254 | 139 |
| 2002 | 5,019 | 275 | 2,551 | ne | 123 | ne | 606 | 36 | ne | NA | NA | 1,089 | 210 | 129 |
| 2003 | 5,493 | 254 | 2,859 | ne | 127 | ne | 603 | 47 | ne | NA | NA | 1,245 | 240 | 118 |
| 2004 | 5,880 | 301 | 2,976 | ne | 170 | ne | 587 | 69 | ne | NA | NA | 1,374 | 249 | 154 |
| 2005 | 6,069 | 287 | 2,992 | ne | 152 | ne | 584 | 64 | ne | NA | NA | 1,576 | 257 | 157 |
| 2006 | 6,658 | 305 | 3,353 | ne | 184 | ne | 639 | 89 | ne | NA | NA | 1,615 | 261 | 212 |
| 2007old[c] | 6,517 | 256 | 3,257 | ne | 195 | ne | 613 | 108 | ne | NA | NA | 1,643 | 277 | 168 |
| 2007new[c] | 6,526 | 264 | 3,205 | 4 | 179 | 8 | 610 | 108 | 28 | NA | 14 | 1,670 | 268 | 168 |
| 2008 | 8,669 | 458 | 4,514 | 6 | 228 | 8 | 751 | 91 | 219 | NA | 23 | 1,826 | 297 | 248 |
| 2009 | 8,698 | 431 | 4,213 | 9 | 331 | 31 | 774 | 160 | 231 | NA | 77 | 1,773 | 291 | 377 |
| 2010[e,f] | 12,751 | 572 | 6,271 | 24 | 318 | 38 | 1,362 | 173 | 467 | NA | 191 | 2,251 | 467 | 617 |
| 2011[f] | 13,363 | 581 | 6,224 | 17 | 326 | 101 | 1,625 | 174 | 509 | NA | 378 | 2,322 | 434 | 672 |
| 2012 | 13,264 | 567 | 6,249 | 14 | 349 | 43 | 1,513 | 209 | 497 | NA | 356 | 2,296 | 431 | 740 |

TABLE 1-9c

## Doctorate-holding nonfaculty researchers in science broad fields: 1979–2019

(Number)

| Year | Total | Agricultural sciences[a] | Biological and biomedical sciences[a] | Communication[a,b,c] | Computer and information sciences | Family and consumer sciences and human sciences[a,b,c] | Geosciences, atmospheric sciences, and ocean sciences | Mathematics and statistics | Multidisciplinary and interdisciplinary studies[a,c] | Natural resources and conservation[a] | Neurobiology and neuroscience[a,c] | Physical sciences[a] | Psychology[d] | Social sciences[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2013 | 13,932 | 550 | 6,527 | 34 | 459 | 43 | 1,518 | 224 | 538 | NA | 417 | 2,312 | 457 | 853 |
| 2014old[g] | 14,283 | 609 | 6,492 | 34 | 450 | 57 | 1,499 | 221 | 658 | NA | 650 | 2,433 | 411 | 769 |
| 2014new[g] | 14,674 | 616 | 6,841 | 34 | 450 | 59 | 1,500 | 221 | 661 | NA | 666 | 2,445 | 411 | 770 |
| 2015 | 15,667 | 747 | 6,948 | 31 | 459 | 74 | 1,754 | 235 | 630 | NA | 718 | 2,701 | 472 | 898 |
| 2016 | 15,940 | 767 | 7,058 | 29 | 470 | 120 | 1,635 | 213 | 727 | NA | 760 | 2,735 | 456 | 970 |
| 2017old[a] | na | na | na | na | na | na | na | na | na | NA | na | na | na | na |
| 2017new[a] | 17,268 | 496 | 8,203 | ne | 476 | ne | 1,794 | 240 | 806 | 364 | NA | 2,871 | 494 | 1,524 |
| 2018 | 18,278 | 565 | 8,250 | ne | 515 | ne | 2,106 | 266 | 832 | 580 | NA | 3,056 | 507 | 1,601 |
| 2019 | 18,819 | 645 | 8,229 | ne | 510 | ne | 2,177 | 305 | 820 | 582 | NA | 3,316 | 576 | 1,659 |

na = not applicable. NA = not available; these fields were collected as part of other fields in other years (see footnotes a and c). ne = not eligible; the fields collected have changed over time.

[a] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Redesign includes the following: natural resources splitting from agricultural sciences; neurosciences being reported under biological and biomedical sciences; human development being reported under psychology; physical sciences adding materials sciences; social sciences no longer including public administration; and multidisciplinary no longer including nanoscience.

[b] The field communications and the field family and consumer sciences and human sciences were added as part of the 2007 field eligibility changes. These fields were dropped in 2017 to align the GSS with other NCSES surveys.

[c] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. The science field communication and the science field and consumer sciences and human sciences were newly eligible in 2007; data for these two fields begin in 2007new. The science field multidisciplinary and interdisciplinary studies was also added to the GSS code list in 2007; some data reported in this field were reported under other fields before 2007 and are included in those fields in 2007old. neuroscience is reported as a separate field of science in 2007new; data were reported under health field neurology in 2007old and previous years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[d] Beginning in 2008, more rigorous follow-up was done with institutions regarding the exclusion of practitioner-oriented graduate degree programs in psychology. This change may affect interpretation of trends in this field. This follow-up was discontinued in 2017.

[e] In 2010, the postdoctoral (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[f] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[g] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

**Note(s):**

"Field" refers to the field of the unit that reports doctorate-holding nonfaculty researchers to the GSS. Sum of the broad fields may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-10a

## Graduate students in engineering detailed fields: 1975–2019

(Number)

| Year | Total | Aerospace, aeronautical, and astronautical engineering | Agricultural engineering | Architecture[a,b] | Bioengineering and biomedical engineering | Biological and biosystems engineering | Chemical engineering | Civil engineering[b] | Electrical, electronics, and communications engineering | Engineering mechanics, physics, and science | Industrial and manufacturing engineering | Mechanical engineering | Metallurgical and materials engineering[a] | Mining engineering | Nanotechnology[a] | Nuclear engineering | Petroleum engineering | Engineering nec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1975 | 68,332 | 1,670 | 631 | na | 883 | na | 5,095 | 12,560 | 16,320 | 1,746 | 11,663 | 8,601 | 2,376 | 412 | NA | 1,636 | 302 | 4,437 |
| 1976 | 66,723 | 1,477 | 690 | na | 895 | na | 5,271 | 11,995 | 15,926 | 1,759 | 10,687 | 8,313 | 2,398 | 515 | NA | 1,600 | 376 | 4,821 |
| 1977 | 68,757 | 1,518 | 754 | na | 855 | na | 5,273 | 12,335 | 17,406 | 1,737 | 10,438 | 8,722 | 2,585 | 452 | NA | 1,491 | 379 | 4,812 |
| 1978[c] | 67,787 | 1,463 | 788 | na | 920 | na | 5,431 | 12,358 | 17,127 | 1,844 | 9,494 | 8,638 | 2,592 | 416 | NA | 1,404 | 428 | 4,884 |
| 1979 | 71,808 | 1,481 | 787 | na | 1,004 | na | 5,685 | 12,822 | 17,715 | 1,681 | 10,729 | 9,251 | 2,778 | 389 | NA | 1,318 | 424 | 5,744 |
| 1980 | 74,335 | 1,737 | 789 | na | 964 | na | 6,038 | 13,097 | 19,132 | 1,796 | 9,698 | 9,888 | 2,934 | 413 | NA | 1,241 | 503 | 6,105 |
| 1981 | 79,585 | 1,883 | 842 | na | 1,017 | na | 6,526 | 14,089 | 20,113 | 1,965 | 9,737 | 10,618 | 3,152 | 462 | NA | 1,283 | 521 | 7,377 |
| 1982 | 83,720 | 1,941 | 911 | na | 1,085 | na | 7,222 | 14,122 | 21,927 | 2,130 | 9,577 | 11,467 | 3,154 | 449 | NA | 1,301 | 586 | 7,848 |
| 1983 | 91,146 | 2,305 | 1,001 | na | 1,220 | na | 7,590 | 14,910 | 25,295 | 2,261 | 9,247 | 12,911 | 3,477 | 524 | NA | 1,203 | 737 | 8,465 |
| 1984 | 92,739 | 2,340 | 989 | na | 1,315 | na | 7,400 | 15,192 | 26,388 | 2,153 | 9,282 | 13,855 | 3,673 | 502 | NA | 1,234 | 744 | 7,672 |
| 1985 | 96,018 | 2,538 | 983 | na | 1,335 | na | 7,177 | 14,902 | 28,203 | 2,098 | 10,525 | 14,157 | 3,959 | 489 | NA | 1,220 | 782 | 7,650 |
| 1986 | 101,905 | 2,804 | 1,118 | na | 1,487 | na | 7,043 | 14,976 | 29,969 | 2,362 | 11,569 | 15,713 | 4,236 | 512 | NA | 1,265 | 747 | 8,104 |
| 1987 | 103,983 | 3,015 | 1,126 | na | 1,628 | na | 7,141 | 14,682 | 31,399 | 2,343 | 12,353 | 16,366 | 4,397 | 513 | NA | 1,279 | 818 | 6,923 |
| 1988 | 102,854 | 3,223 | 1,096 | na | 1,708 | na | 6,643 | 14,811 | 32,035 | 2,386 | 11,575 | 16,151 | 4,381 | 489 | NA | 1,303 | 742 | 6,311 |
| 1989 | 104,065 | 3,524 | 1,092 | na | 1,867 | na | 6,482 | 14,909 | 33,257 | 2,077 | 11,333 | 16,265 | 4,635 | 418 | NA | 1,323 | 665 | 6,218 |
| 1990 | 107,658 | 3,934 | 985 | na | 2,097 | na | 6,768 | 15,542 | 33,722 | 2,020 | 11,555 | 16,879 | 4,983 | 437 | NA | 1,278 | 670 | 6,788 |
| 1991 | 113,535 | 4,120 | 1,023 | na | 2,199 | na | 7,157 | 17,398 | 35,111 | 2,154 | 12,996 | 17,730 | 5,203 | 489 | NA | 1,282 | 705 | 5,968 |
| 1992 | 118,039 | 4,036 | 1,053 | na | 2,492 | na | 7,433 | 19,572 | 36,428 | 2,218 | 13,826 | 18,637 | 5,550 | 437 | NA | 1,286 | 737 | 4,334 |
| 1993 | 116,872 | 3,940 | 1,053 | na | 2,640 | na | 7,554 | 19,583 | 35,290 | 2,180 | 13,905 | 18,477 | 5,410 | 427 | NA | 1,306 | 725 | 4,382 |
| 1994 | 113,024 | 3,715 | 1,095 | na | 2,716 | na | 7,639 | 19,925 | 33,067 | 2,089 | 13,992 | 17,761 | 5,228 | 424 | NA | 1,246 | 624 | 3,503 |
| 1995 | 107,201 | 3,343 | 1,076 | na | 2,693 | na | 7,452 | 19,218 | 30,861 | 1,955 | 13,475 | 16,363 | 4,956 | 373 | NA | 1,154 | 610 | 3,672 |
| 1996 | 103,224 | 3,208 | 1,055 | na | 2,689 | na | 7,408 | 18,528 | 29,941 | 1,751 | 12,675 | 15,509 | 4,747 | 371 | NA | 980 | 562 | 3,800 |
| 1997 | 101,148 | 3,083 | 991 | na | 2,797 | na | 7,288 | 17,193 | 30,787 | 1,647 | 11,957 | 15,045 | 4,688 | 348 | NA | 868 | 561 | 3,895 |
| 1998 | 100,038 | 3,137 | 975 | na | 2,855 | na | 7,093 | 16,517 | 31,384 | 1,701 | 11,221 | 14,696 | 4,680 | 304 | NA | 821 | 571 | 4,083 |
| 1999 | 101,691 | 3,349 | 986 | na | 3,069 | na | 6,883 | 16,226 | 31,822 | 1,627 | 11,803 | 14,956 | 4,481 | 328 | NA | 830 | 642 | 4,689 |
| 2000 | 104,112 | 3,407 | 943 | na | 3,197 | na | 7,056 | 16,451 | 33,611 | 1,632 | 12,119 | 15,235 | 4,377 | 287 | NA | 792 | 627 | 4,378 |
| 2001 | 109,493 | 3,451 | 947 | na | 3,599 | na | 6,913 | 16,665 | 36,100 | 1,798 | 12,940 | 15,852 | 4,721 | 240 | NA | 801 | 656 | 4,810 |
| 2002 | 119,668 | 3,685 | 952 | na | 4,338 | na | 7,414 | 17,713 | 39,948 | 2,121 | 14,033 | 17,139 | 4,992 | 267 | NA | 795 | 766 | 5,505 |
| 2003 | 127,377 | 4,048 | 1,058 | na | 5,301 | na | 7,516 | 18,890 | 41,763 | 2,240 | 14,313 | 18,393 | 5,131 | 278 | NA | 885 | 849 | 6,712 |
| 2004 | 123,566 | 4,089 | 1,041 | na | 5,807 | na | 7,452 | 18,561 | 38,995 | 2,198 | 13,852 | 17,852 | 5,059 | 308 | NA | 971 | 845 | 6,536 |
| 2005 | 120,565 | 4,170 | 1,059 | na | 6,067 | na | 7,173 | 18,114 | 37,450 | 1,951 | 13,650 | 17,373 | 5,160 | 279 | NA | 1,013 | 808 | 6,298 |
| 2006 | 123,041 | 4,482 | 1,073 | na | 6,482 | na | 7,261 | 17,802 | 38,265 | 2,046 | 13,829 | 17,919 | 5,268 | 244 | NA | 1,099 | 813 | 6,458 |
| 2007old[b] | 130,255 | 4,616 | 1,126 | na | 6,881 | na | 7,383 | 19,867 | 40,207 | 1,843 | 14,290 | 18,366 | 5,365 | 307 | na | 1,208 | 1,014 | 7,782 |
| 2007new[b] | 131,676 | 4,616 | 1,126 | 4,601 | 6,904 | na | 7,584 | 16,071 | 40,588 | 1,806 | 14,474 | 18,347 | 5,314 | 222 | na | 1,180 | 1,014 | 7,829 |

TABLE 1-10a

## Graduate students in engineering detailed fields: 1975–2019

(Number)

| Year | Total | Aerospace, aeronautical, and astronautical engineering | Agricultural engineering | Architecture[a,b] | Bioengineering and biomedical engineering | Biological and biosystems engineering | Chemical engineering | Civil engineering[b] | Electrical, electronics, and communications engineering | Engineering mechanics, physics, and science | Industrial and manufacturing engineering | Mechanical engineering | Metallurgical and materials engineering[a] | Mining engineering | Nanotechnology[a] | Nuclear engineering | Petroleum engineering | Engineering nec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 137,856 | 4,902 | 1,233 | 5,905 | 7,339 | na | 7,892 | 16,931 | 41,164 | 2,099 | 15,692 | 19,585 | 5,539 | 290 | na | 1,201 | 1,009 | 7,075 |
| 2009 | 144,677 | 5,266 | 1,303 | 6,804 | 7,904 | na | 8,188 | 18,638 | 41,218 | 2,168 | 15,825 | 21,243 | 5,863 | 312 | na | 1,243 | 1,190 | 7,512 |
| 2010 | 149,241 | 5,540 | 1,457 | 6,795 | 8,497 | na | 8,668 | 19,559 | 41,336 | 2,071 | 15,205 | 22,509 | 6,274 | 419 | na | 1,459 | 1,295 | 8,157 |
| 2011 | 146,501 | 5,691 | 1,656 | 3,111 | 9,175 | na | 8,828 | 19,596 | 41,580 | 2,101 | 14,494 | 21,883 | 6,649 | 500 | na | 1,499 | 1,301 | 8,437 |
| 2012 | 148,385 | 5,069 | 1,552 | 2,363 | 9,157 | na | 9,222 | 19,922 | 42,347 | 2,227 | 14,469 | 23,088 | 6,985 | 356 | na | 1,513 | 1,525 | 8,590 |
| 2013 | 153,049 | 5,181 | 1,642 | 2,176 | 9,198 | na | 9,698 | 20,110 | 45,562 | 2,142 | 14,363 | 24,087 | 7,144 | 357 | na | 1,459 | 1,609 | 8,321 |
| 2014old[d] | 162,013 | 5,116 | 1,717 | 1,812 | 9,510 | na | 9,853 | 20,660 | 50,051 | 2,151 | 14,659 | 25,508 | 7,473 | 396 | na | 1,467 | 2,056 | 9,584 |
| 2014new[d] | 164,488 | 5,116 | 1,740 | 1,817 | 9,510 | na | 9,870 | 20,789 | 51,909 | 2,162 | 14,845 | 25,651 | 7,518 | 396 | na | 1,467 | 2,056 | 9,642 |
| 2015 | 169,354 | 5,345 | 1,630 | 1,565 | 9,761 | na | 10,008 | 20,978 | 52,940 | 1,708 | 16,284 | 27,314 | 7,741 | 407 | na | 1,449 | 2,021 | 10,203 |
| 2016 | 168,443 | 5,416 | 1,626 | 1,671 | 10,208 | na | 10,187 | 20,569 | 50,062 | 1,756 | 16,200 | 27,898 | 8,106 | 378 | na | 1,466 | 1,862 | 11,038 |
| 2017old[a] | 166,819 | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| 2017new[a] | 165,581 | 5,708 | 1,186 | ne | 10,882 | 234 | 10,166 | 21,132 | 47,752 | 2,136 | 15,905 | 27,428 | 6,541 | 541 | 139 | 1,442 | 1,578 | 12,811 |
| 2018 | 163,301 | 5,848 | 1,032 | ne | 11,480 | 283 | 10,011 | 20,461 | 46,227 | 2,157 | 15,987 | 26,593 | 6,689 | 527 | 118 | 1,453 | 1,403 | 13,032 |
| 2019 | 164,004 | 6,255 | 1,156 | ne | 12,050 | 308 | 9,689 | 19,625 | 46,754 | 2,299 | 15,674 | 26,108 | 6,590 | 493 | 195 | 1,449 | 1,249 | 14,110 |
| Master's students | | | | | | | | | | | | | | | | | | |
| 2017new[a] | 96,756 | 3,322 | 505 | ne | 4,037 | 71 | 3,292 | 13,506 | 29,816 | 679 | 12,272 | 16,279 | 2,115 | 312 | 44 | 444 | 916 | 9,146 |
| 2018 | 93,064 | 3,342 | 371 | ne | 4,202 | 80 | 3,061 | 12,729 | 28,108 | 729 | 12,389 | 15,434 | 2,079 | 316 | 47 | 407 | 754 | 9,016 |
| 2019 | 91,939 | 3,701 | 494 | ne | 4,335 | 89 | 2,632 | 11,873 | 28,177 | 852 | 11,912 | 14,861 | 1,974 | 292 | 49 | 418 | 642 | 9,638 |
| Doctoral students | | | | | | | | | | | | | | | | | | |
| 2017new[a] | 68,825 | 2,386 | 681 | ne | 6,845 | 163 | 6,874 | 7,626 | 17,936 | 1,457 | 3,633 | 11,149 | 4,426 | 229 | 95 | 998 | 662 | 3,665 |
| 2018 | 70,237 | 2,506 | 661 | ne | 7,278 | 203 | 6,950 | 7,732 | 18,119 | 1,428 | 3,598 | 11,159 | 4,610 | 211 | 71 | 1,046 | 649 | 4,016 |
| 2019 | 72,065 | 2,554 | 662 | ne | 7,715 | 219 | 7,057 | 7,752 | 18,577 | 1,447 | 3,762 | 11,247 | 4,616 | 201 | 146 | 1,031 | 607 | 4,472 |

na = not applicable; data were not collected at this level of detail in the year shown. NA = not available; nanotechnology was not collected until 2007. ne = not eligible.

nec = not elsewhere classified.

[a] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Materials sciences was reported as part of metallurgical and materials engineering from 2011–16, starting in 2017 materials sciences is reported as part of physical sciences, nanotechnology was reported as part of the science detailed field multidisciplinary and interdisciplinary studies from 2007–16, and starting in 2017 architecture was removed.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. Architecture is reported as a separate field of engineering in 2007new;

data were reported under civil engineering in 2007old and previous years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314**.

**Note(s):**

Sum of the broad fields may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-10b

## Postdoctoral appointees in engineering detailed fields: 1979–2019

(Number)

| Year | Total | Aerospace, aeronautical, and astronautical engineering | Agricultural engineering | Architecture[a,b] | Bioengineering and biomedical engineering | Biological and biosystems engineering | Chemical engineering | Civil engineering[b] | Electrical, electronics, and communications engineering | Engineering mechanics, physics, and science | Industrial and manufacturing engineering | Mechanical engineering | Metallurgical and materials engineering[a] | Mining engineering | Nanotechnology[a] | Nuclear engineering | Petroleum engineering | Engineering nec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1979 | 1,067 | 32 | 29 | na | 28 | na | 192 | 128 | 142 | 74 | 8 | 143 | 209 | 5 | NA | 20 | 6 | 51 |
| 1980 | 981 | 20 | 13 | na | 25 | na | 185 | 122 | 123 | 79 | 16 | 137 | 172 | 3 | NA | 22 | 6 | 58 |
| 1981 | 1,040 | 14 | 12 | na | 32 | na | 173 | 103 | 191 | 87 | 13 | 130 | 194 | 16 | NA | 26 | 2 | 47 |
| 1982 | 980 | 25 | 9 | na | 28 | na | 177 | 103 | 178 | 76 | 9 | 130 | 168 | 10 | NA | 18 | 4 | 45 |
| 1983 | 1,108 | 32 | 5 | na | 27 | na | 199 | 131 | 180 | 71 | 13 | 182 | 204 | 19 | NA | 15 | 1 | 29 |
| 1984 | 1,203 | 42 | 11 | na | 31 | na | 246 | 146 | 178 | 63 | 21 | 196 | 168 | 18 | NA | 19 | 4 | 60 |
| 1985 | 1,356 | 51 | 16 | na | 46 | na | 274 | 122 | 183 | 90 | 18 | 207 | 245 | 19 | NA | 31 | 6 | 48 |
| 1986 | 1,405 | 48 | 17 | na | 53 | na | 298 | 140 | 175 | 67 | 25 | 240 | 250 | 25 | NA | 31 | 1 | 35 |
| 1987 | 1,446 | 43 | 29 | na | 44 | na | 312 | 174 | 177 | 41 | 26 | 216 | 283 | 26 | NA | 20 | 10 | 45 |
| 1988 | 1,690 | 48 | 31 | na | 47 | na | 425 | 203 | 187 | 38 | 32 | 218 | 325 | 63 | NA | 17 | 8 | 48 |
| 1989 | 1,928 | 38 | 39 | na | 69 | na | 477 | 182 | 193 | 74 | 32 | 304 | 323 | 90 | NA | 36 | 9 | 62 |
| 1990 | 1,950 | 67 | 34 | na | 71 | na | 557 | 168 | 242 | 76 | 6 | 222 | 363 | 19 | NA | 30 | 15 | 80 |
| 1991 | 2,262 | 77 | 37 | na | 59 | na | 576 | 186 | 346 | 117 | 27 | 326 | 392 | 11 | NA | 29 | 19 | 60 |
| 1992 | 2,369 | 92 | 39 | na | 79 | na | 544 | 188 | 318 | 71 | 38 | 352 | 450 | 23 | NA | 34 | 12 | 129 |
| 1993 | 2,446 | 116 | 44 | na | 80 | na | 529 | 181 | 388 | 78 | 63 | 358 | 403 | 19 | NA | 40 | 13 | 134 |
| 1994 | 2,606 | 100 | 51 | na | 135 | na | 527 | 210 | 411 | 95 | 54 | 388 | 441 | 24 | NA | 39 | 14 | 117 |
| 1995 | 2,648 | 101 | 51 | na | 129 | na | 576 | 201 | 381 | 101 | 30 | 410 | 490 | 19 | NA | 28 | 9 | 122 |
| 1996 | 2,677 | 109 | 51 | na | 140 | na | 545 | 230 | 395 | 93 | 30 | 425 | 496 | 10 | NA | 28 | 6 | 119 |
| 1997 | 2,971 | 125 | 62 | na | 154 | na | 636 | 248 | 508 | 115 | 28 | 440 | 465 | 11 | NA | 33 | 21 | 125 |
| 1998 | 2,853 | 133 | 56 | na | 180 | na | 613 | 225 | 488 | 110 | 30 | 434 | 404 | 10 | NA | 19 | 14 | 137 |
| 1999 | 3,196 | 128 | 62 | na | 242 | na | 671 | 299 | 548 | 122 | 27 | 476 | 421 | 6 | NA | 30 | 19 | 145 |
| 2000 | 3,313 | 111 | 56 | na | 220 | na | 703 | 295 | 525 | 163 | 48 | 480 | 507 | 8 | NA | 40 | 20 | 137 |
| 2001 | 3,152 | 128 | 58 | na | 262 | na | 574 | 268 | 436 | 162 | 21 | 501 | 479 | 14 | NA | 77 | 17 | 155 |
| 2002 | 3,566 | 140 | 65 | na | 284 | na | 758 | 342 | 613 | 169 | 43 | 441 | 507 | 10 | NA | 26 | 15 | 153 |
| 2003 | 3,810 | 141 | 85 | na | 388 | na | 686 | 300 | 646 | 180 | 45 | 543 | 539 | 12 | NA | 49 | 17 | 179 |
| 2004 | 3,949 | 141 | 79 | na | 425 | na | 689 | 313 | 654 | 180 | 50 | 514 | 567 | 9 | NA | 67 | 14 | 247 |
| 2005 | 4,166 | 153 | 89 | na | 477 | na | 702 | 384 | 689 | 168 | 51 | 562 | 578 | 8 | NA | 41 | 13 | 251 |
| 2006 | 4,642 | 165 | 116 | na | 591 | na | 735 | 458 | 721 | 224 | 51 | 644 | 571 | 11 | NA | 85 | 18 | 252 |
| 2007old[b] | 4,908 | 178 | 139 | na | 640 | na | 758 | 419 | 885 | 192 | 73 | 725 | 555 | 4 | na | 77 | 22 | 241 |
| 2007new[b] | 4,942 | 178 | 139 | 5 | 640 | na | 790 | 417 | 884 | 183 | 71 | 722 | 564 | 5 | na | 73 | 22 | 249 |
| 2008 | 5,462 | 154 | 135 | 11 | 710 | na | 880 | 465 | 987 | 214 | 115 | 784 | 605 | 5 | na | 85 | 28 | 284 |
| 2009 | 6,416 | 168 | 110 | 22 | 960 | na | 1,084 | 535 | 1,025 | 226 | 109 | 948 | 758 | 4 | na | 90 | 36 | 341 |
| 2010[c,d] | 6,969 | 212 | 119 | 10 | 1,023 | na | 1,077 | 571 | 1,095 | 236 | 151 | 1,021 | 841 | 4 | na | 107 | 44 | 458 |
| 2011[d] | 6,786 | 202 | 129 | 16 | 1,069 | na | 1,137 | 551 | 1,035 | 281 | 121 | 889 | 860 | 4 | na | 111 | 35 | 346 |

TABLE 1-10b

## Postdoctoral appointees in engineering detailed fields: 1979–2019

(Number)

| Year | Total | Aerospace, aeronautical, and astronautical engineering | Agricultural engineering | Architecture[a,b] | Bioengineering and biomedical engineering | Biological and biosystems engineering | Chemical engineering | Civil engineering[b] | Electrical, electronics, and communications engineering | Engineering mechanics, physics, and science | Industrial and manufacturing engineering | Mechanical engineering | Metallurgical and materials engineering[a] | Mining engineering | Nanotechnology[a] | Nuclear engineering | Petroleum engineering | Engineering nec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | 7,103 | 170 | 133 | 6 | 1,161 | na | 1,098 | 590 | 1,152 | 292 | 127 | 985 | 854 | 5 | na | 120 | 53 | 357 |
| 2013 | 7,106 | 202 | 152 | 17 | 1,103 | na | 1,230 | 587 | 1,180 | 240 | 133 | 1,034 | 809 | 7 | na | 105 | 49 | 258 |
| 2014old[e] | 7,292 | 220 | 146 | 14 | 1,196 | na | 1,244 | 629 | 1,177 | 270 | 131 | 1,055 | 776 | 15 | na | 112 | 66 | 241 |
| 2014new[e] | 7,307 | 220 | 150 | 14 | 1,198 | na | 1,244 | 629 | 1,179 | 270 | 131 | 1,058 | 780 | 15 | na | 112 | 66 | 241 |
| 2015 | 7,656 | 217 | 221 | 17 | 1,201 | na | 1,283 | 670 | 1,160 | 251 | 142 | 1,161 | 911 | 15 | na | 107 | 73 | 227 |
| 2016 | 7,796 | 201 | 165 | 16 | 1,278 | na | 1,218 | 706 | 1,186 | 284 | 130 | 1,080 | 882 | 10 | na | 100 | 72 | 468 |
| 2017old[a] | 7,929 | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| 2017new[a] | 7,839 | 196 | 111 | ne | 1,398 | 78 | 1,197 | 804 | 1,170 | 316 | 127 | 1,089 | 550 | 15 | 85 | 94 | 65 | 544 |
| 2018 | 7,914 | 207 | 113 | ne | 1,433 | 96 | 1,142 | 739 | 1,197 | 354 | 156 | 1,069 | 549 | 26 | 134 | 106 | 63 | 530 |
| 2019 | 8,266 | 227 | 112 | ne | 1,515 | 87 | 1,157 | 865 | 1,305 | 180 | 167 | 1,142 | 642 | 23 | 151 | 80 | 72 | 541 |

na = not applicable; data were not collected at this level of detail in the year shown. NA = not available; nanotechnology was not collected until 2007. ne = not eligible.

nec = not elsewhere classified.

[a] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Materials sciences was reported as part of metallurgical and materials engineering from 2011–16; starting in 2017 materials sciences is reported as part of physical sciences; nanotechnology was reported as part of the science detailed field multidisciplinary and interdisciplinary studies from 2007–16, and starting in 2017 architecture was removed.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. Architecture is reported as a separate field of engineering in 2007new; data were reported under civil engineering in 2007old and previous years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] In 2010, the postdoctoral appointee (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[d] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[e] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314/**.

**Note(s):**

"Field" refers to the field of the unit that reports postdocs to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Sum of the broad fields may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 1-10c

## Doctorate-holding nonfaculty researchers in engineering detailed fields: 1979–2019

(Number)

| Year | Total | Aerospace, aeronautical, and astronautical engineering | Agricultural engineering | Architecture[a,b] | Bioengineering and biomedical engineering | Biological and biosystems engineering | Chemical engineering | Civil engineering[b] | Electrical, electronics, and communications engineering | Engineering mechanics, physics, and science | Industrial and manufacturing engineering | Mechanical engineering | Metallurgical and materials engineering[a] | Mining engineering | Nanotechnology[a] | Nuclear engineering | Petroleum engineering | Engineering nec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1979 | 273 | 18 | 9 | na | 6 | na | 37 | 25 | 65 | 30 | 3 | 45 | 21 | 9 | NA | 2 | 1 | 2 |
| 1980 | 423 | 31 | 5 | na | 4 | na | 51 | 38 | 77 | 26 | 14 | 68 | 80 | 0 | NA | 22 | 0 | 7 |
| 1981 | 503 | 8 | 4 | na | 3 | na | 75 | 30 | 81 | 39 | 4 | 113 | 96 | 0 | NA | 21 | 0 | 29 |
| 1982 | 670 | 26 | 4 | na | 9 | na | 96 | 114 | 74 | 33 | 27 | 149 | 89 | 9 | NA | 19 | 0 | 21 |
| 1983 | 631 | 24 | 7 | na | 8 | na | 50 | 86 | 127 | 36 | 10 | 128 | 94 | 3 | NA | 29 | 4 | 25 |
| 1984 | 589 | 22 | 10 | na | 12 | na | 60 | 51 | 149 | 47 | 9 | 86 | 100 | 0 | NA | 19 | 6 | 18 |
| 1985 | 615 | 21 | 4 | na | 14 | na | 78 | 31 | 149 | 29 | 3 | 112 | 131 | 0 | NA | 26 | 5 | 12 |
| 1986 | 521 | 34 | 1 | na | 5 | na | 75 | 33 | 88 | 27 | 2 | 84 | 128 | 1 | NA | 28 | 1 | 14 |
| 1987 | 443 | 28 | 2 | na | 6 | na | 49 | 38 | 62 | 24 | 13 | 85 | 96 | 1 | NA | 24 | 2 | 13 |
| 1988 | 566 | 21 | 10 | na | 6 | na | 76 | 39 | 115 | 20 | 7 | 107 | 124 | 0 | NA | 27 | 2 | 12 |
| 1989 | 581 | 14 | 19 | na | 18 | na | 75 | 37 | 114 | 19 | 11 | 89 | 120 | 0 | NA | 38 | 1 | 26 |
| 1990 | 609 | 24 | 13 | na | 12 | na | 77 | 51 | 104 | 17 | 21 | 127 | 103 | 1 | NA | 36 | 5 | 18 |
| 1991 | 659 | 26 | 12 | na | 16 | na | 61 | 54 | 121 | 16 | 20 | 113 | 147 | 3 | NA | 34 | 13 | 23 |
| 1992 | 737 | 39 | 10 | na | 26 | na | 148 | 52 | 123 | 16 | 17 | 97 | 131 | 2 | NA | 37 | 12 | 27 |
| 1993 | 805 | 69 | 6 | na | 25 | na | 128 | 67 | 135 | 34 | 8 | 116 | 142 | 5 | NA | 27 | 16 | 27 |
| 1994 | 825 | 66 | 23 | na | 36 | na | 87 | 54 | 159 | 30 | 6 | 135 | 139 | 2 | NA | 36 | 17 | 35 |
| 1995 | 789 | 80 | 27 | na | 26 | na | 70 | 66 | 175 | 37 | 3 | 108 | 120 | 3 | NA | 32 | 11 | 31 |
| 1996 | 731 | 86 | 15 | na | 21 | na | 82 | 70 | 144 | 38 | 2 | 108 | 95 | 7 | NA | 29 | 10 | 24 |
| 1997 | 848 | 84 | 19 | na | 31 | na | 159 | 66 | 168 | 50 | 8 | 109 | 83 | 3 | NA | 28 | 4 | 36 |
| 1998 | 810 | 68 | 28 | na | 34 | na | 149 | 61 | 152 | 49 | 5 | 109 | 120 | 1 | NA | 4 | 6 | 24 |
| 1999 | 940 | 87 | 28 | na | 58 | na | 141 | 81 | 169 | 60 | 5 | 127 | 115 | 2 | NA | 11 | 10 | 46 |
| 2000 | 896 | 39 | 24 | na | 42 | na | 110 | 131 | 145 | 60 | 7 | 176 | 109 | 0 | NA | 13 | 10 | 30 |
| 2001 | 801 | 15 | 27 | na | 36 | na | 95 | 98 | 118 | 62 | 12 | 133 | 103 | 4 | NA | 4 | 2 | 92 |
| 2002 | 903 | 17 | 29 | na | 43 | na | 87 | 118 | 131 | 76 | 22 | 121 | 107 | 2 | NA | 47 | 14 | 89 |
| 2003 | 952 | 30 | 25 | na | 49 | na | 96 | 98 | 172 | 78 | 11 | 125 | 146 | 3 | NA | 15 | 4 | 100 |
| 2004 | 1,043 | 60 | 28 | na | 67 | na | 92 | 111 | 175 | 69 | 26 | 175 | 174 | 5 | NA | 11 | 9 | 41 |
| 2005 | 946 | 54 | 22 | na | 58 | na | 66 | 113 | 178 | 61 | 24 | 165 | 127 | 1 | NA | 3 | 23 | 51 |
| 2006 | 1,118 | 66 | 33 | na | 65 | na | 144 | 134 | 158 | 72 | 41 | 170 | 142 | 2 | NA | 3 | 24 | 64 |
| 2007old[b] | 1,298 | 29 | 29 | na | 91 | na | 131 | 141 | 304 | 81 | 32 | 199 | 149 | 3 | na | 4 | 24 | 81 |
| 2007new[b] | 1,310 | 29 | 29 | 0 | 91 | na | 139 | 143 | 310 | 81 | 27 | 199 | 150 | 3 | na | 4 | 24 | 81 |
| 2008 | 1,419 | 41 | 57 | 5 | 89 | na | 173 | 161 | 283 | 78 | 67 | 193 | 124 | 10 | na | 26 | 15 | 97 |
| 2009 | 1,737 | 40 | 52 | 6 | 153 | na | 224 | 181 | 296 | 124 | 76 | 246 | 180 | 1 | na | 28 | 17 | 113 |
| 2010[c,d] | 2,406 | 58 | 70 | 15 | 250 | na | 265 | 256 | 395 | 114 | 108 | 355 | 224 | 7 | na | 39 | 23 | 227 |
| 2011[d] | 2,312 | 35 | 62 | 11 | 247 | na | 204 | 278 | 406 | 119 | 87 | 318 | 233 | 4 | na | 44 | 36 | 228 |

TABLE 1-10c

## Doctorate-holding nonfaculty researchers in engineering detailed fields: 1979–2019

(Number)

| Year | Total | Aerospace, aeronautical, and astronautical engineering | Agricultural engineering | Architecture[a,b] | Bioengineering and biomedical engineering | Biological and biosystems engineering | Chemical engineering | Civil engineering[b] | Electrical, electronics, and communications engineering | Engineering mechanics, physics, and science | Industrial and manufacturing engineering | Mechanical engineering | Metallurgical and materials engineering[a] | Mining engineering | Nanotechnology[a] | Nuclear engineering | Petroleum engineering | Engineering nec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | 2,497 | 49 | 65 | 11 | 295 | na | 211 | 298 | 405 | 170 | 70 | 389 | 245 | 10 | na | 30 | 40 | 209 |
| 2013 | 2,494 | 40 | 50 | 10 | 238 | na | 264 | 296 | 431 | 157 | 77 | 403 | 273 | 10 | na | 27 | 40 | 178 |
| 2014old[e] | 2,744 | 43 | 55 | 5 | 322 | na | 276 | 313 | 459 | 192 | 90 | 437 | 279 | 8 | na | 34 | 63 | 168 |
| 2014new[e] | 2,745 | 43 | 55 | 5 | 322 | na | 276 | 313 | 459 | 192 | 90 | 438 | 279 | 8 | na | 34 | 63 | 168 |
| 2015 | 2,929 | 67 | 70 | 6 | 289 | na | 264 | 364 | 492 | 184 | 150 | 425 | 295 | 20 | na | 26 | 56 | 221 |
| 2016 | 3,155 | 77 | 55 | 30 | 311 | na | 297 | 420 | 560 | 188 | 162 | 393 | 353 | 23 | na | 29 | 57 | 200 |
| 2017old[a] | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na | na |
| 2017new[a] | 3,274 | 102 | 52 | ne | 415 | 36 | 281 | 422 | 557 | 200 | 119 | 458 | 181 | 52 | 33 | 22 | 59 | 285 |
| 2018 | 3,570 | 115 | 60 | ne | 440 | 51 | 257 | 414 | 588 | 220 | 105 | 489 | 215 | 52 | 43 | 41 | 80 | 400 |
| 2019 | 3,909 | 124 | 55 | ne | 492 | 53 | 328 | 492 | 637 | 186 | 137 | 531 | 242 | 61 | 76 | 41 | 82 | 372 |

na = not applicable; data were not collected at this level of detail in the year shown. NA = not available; nanotechnology was not collected until 2007. ne = not eligible.

nec = not elsewhere classified.

[a] As part of 2017 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) redesign, the GSS taxonomy was changed to align with the National Center for Science and Engineering Statistics (NCSES) Taxonomy of Disciplines (TOD), thus increasing comparability with other NCSES surveys. As a result, some eligible fields were reclassified and a small number of fields became fully or partially ineligible. Comparisons to prior years should use the 2017old estimates and should be limited to broad areas of study—detailed field comparisons are not recommended. Materials sciences was reported as part of metallurgical and materials engineering from 2011–16, starting in 2017 materials sciences is reported as part of physical sciences, nanotechnology was reported as part of the science detailed field multidisciplinary and interdisciplinary studies from 2007–16, and starting in 2017 architecture was removed.

[b] In 2007, eligible fields were reclassified, newly eligible fields were added, and the survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. Architecture is reported as a separate field of engineering in 2007new; data were reported under civil engineering in 2007old and previous years. See appendix A in **https://www.nsf.gov/statistics/nsf10307/** for more detail.

[c] In 2010, the postdoctoral appointee (postdoc) and nonfaculty researcher (NFR) section of the survey was expanded and significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. Thus, it is unclear how much of the increases in 2010 and later years over 2009 and prior years are from growth in postdocs and NFRs and how much are from improved data collection. More information on the changes to the data collection is available at **https://www.nsf.gov/statistics/infbrief/nsf13334/**.

[d] Postdoc and NFR data from 2010 and 2011 were reimputed following the 2012 data collection; these data supersede those contained in previous reports.

[e] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. For more information, see **https://www.nsf.gov/statistics/2016/nsf16314/**.

**Note(s):**

"Field" refers to the field of the unit that reports doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Sum of the broad fields may not add to total because of rounding. Master's and doctoral students were not reported separately until 2017.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE 2-1

## Demographic characteristics of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health: 2019

(Number and percent)

| Sex, citizenship, ethnicity, and race | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All individuals | 690,117 | 100.0 | 408,228 | 100.0 | 281,889 | 100.0 | 66,247 | 100.0 | 30,349 | 100.0 |
| Male | 364,995 | 52.9 | 205,768 | 50.4 | 159,227 | 56.5 | 39,173 | 59.1 | 17,980 | 59.2 |
| Female | 325,122 | 47.1 | 202,460 | 49.6 | 122,662 | 43.5 | 27,074 | 40.9 | 12,369 | 40.8 |
| U.S. citizens and permanent residents[a] | 456,504 | 66.1 | 287,370 | 70.4 | 169,134 | 60.0 | 29,452 | 44.5 | na | na |
| Hispanic or Latino | 54,467 | 7.9 | 36,777 | 9.0 | 17,690 | 6.3 | 1,924 | 2.9 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 2,077 | 0.3 | 1,327 | 0.3 | 750 | 0.3 | 69 | 0.1 | na | na |
| Asian | 48,844 | 7.1 | 31,301 | 7.7 | 17,543 | 6.2 | 5,891 | 8.9 | na | na |
| Black or African American | 38,048 | 5.5 | 27,598 | 6.8 | 10,450 | 3.7 | 1,088 | 1.6 | na | na |
| Native Hawaiian or Other Pacific Islander | 744 | 0.1 | 542 | 0.1 | 202 | 0.1 | 52 | 0.1 | na | na |
| White | 272,545 | 39.5 | 163,836 | 40.1 | 108,709 | 38.6 | 16,972 | 25.6 | na | na |
| More than one race | 15,613 | 2.3 | 9,593 | 2.3 | 6,020 | 2.1 | 519 | 0.8 | na | na |
| Unknown ethnicity and race | 24,166 | 3.5 | 16,396 | 4.0 | 7,770 | 2.8 | 2,937 | 4.4 | na | na |
| Temporary visa holders | 233,613 | 33.9 | 120,858 | 29.6 | 112,755 | 40.0 | 36,795 | 55.5 | na | na |
| Male | | | | | | | | | | |
| U.S. citizens and permanent residents[a] | 218,337 | 31.6 | 131,686 | 32.3 | 86,651 | 30.7 | 15,570 | 23.5 | na | na |
| Hispanic or Latino | 24,064 | 3.5 | 15,378 | 3.8 | 8,686 | 3.1 | 963 | 1.5 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 831 | 0.1 | 532 | 0.1 | 299 | 0.1 | 28 | * | na | na |
| Asian | 25,453 | 3.7 | 16,315 | 4.0 | 9,138 | 3.2 | 3,278 | 4.9 | na | na |
| Black or African American | 14,725 | 2.1 | 10,593 | 2.6 | 4,132 | 1.5 | 433 | 0.7 | na | na |
| Native Hawaiian or Other Pacific Islander | 344 | * | 254 | 0.1 | 90 | * | 26 | * | na | na |
| White | 134,227 | 19.4 | 77,033 | 18.9 | 57,194 | 20.3 | 8,980 | 13.6 | na | na |
| More than one race | 7,118 | 1.0 | 4,213 | 1.0 | 2,905 | 1.0 | 243 | 0.4 | na | na |
| Unknown ethnicity and race | 11,575 | 1.7 | 7,368 | 1.8 | 4,207 | 1.5 | 1,619 | 2.4 | na | na |
| Temporary visa holders | 146,658 | 21.3 | 74,082 | 18.1 | 72,576 | 25.7 | 23,603 | 35.6 | na | na |
| Female | | | | | | | | | | |
| U.S. citizens and permanent residents[a] | 238,167 | 34.5 | 155,684 | 38.1 | 82,483 | 29.3 | 13,882 | 21.0 | na | na |
| Hispanic or Latino | 30,403 | 4.4 | 21,399 | 5.2 | 9,004 | 3.2 | 961 | 1.5 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 1,246 | 0.2 | 795 | 0.2 | 451 | 0.2 | 41 | 0.1 | na | na |
| Asian | 23,391 | 3.4 | 14,986 | 3.7 | 8,405 | 3.0 | 2,613 | 3.9 | na | na |
| Black or African American | 23,323 | 3.4 | 17,005 | 4.2 | 6,318 | 2.2 | 655 | 1.0 | na | na |
| Native Hawaiian or Other Pacific Islander | 400 | 0.1 | 288 | 0.1 | 112 | * | 26 | * | na | na |
| White | 138,318 | 20.0 | 86,803 | 21.3 | 51,515 | 18.3 | 7,992 | 12.1 | na | na |
| More than one race | 8,495 | 1.2 | 5,380 | 1.3 | 3,115 | 1.1 | 276 | 0.4 | na | na |
| Unknown ethnicity and race | 12,591 | 1.8 | 9,028 | 2.2 | 3,563 | 1.3 | 1,318 | 2.0 | na | na |
| Temporary visa holders | 86,955 | 12.6 | 46,776 | 11.5 | 40,179 | 14.3 | 13,192 | 19.9 | na | na |

* = value < 0.05%. na = not applicable; citizenship and race and ethnicity data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 2-2

## Citizenship, ethnicity, and race of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields, by sex: 2019

(Number and percent)

| Citizenship, ethnicity, race, and field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| All surveyed fields | 690,117 | 47.1 | 408,228 | 49.6 | 281,889 | 43.5 | 66,247 | 40.9 | 30,349 | 40.8 |
| U.S. citizens and permanent residents[a] | 456,504 | 52.2 | 287,370 | 54.2 | 169,134 | 48.8 | 29,452 | 47.1 | na | na |
| Hispanic or Latino | 54,467 | 55.8 | 36,777 | 58.2 | 17,690 | 50.9 | 1,924 | 49.9 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 2,077 | 60.0 | 1,327 | 59.9 | 750 | 60.1 | 69 | 59.4 | na | na |
| Asian | 48,844 | 47.9 | 31,301 | 47.9 | 17,543 | 47.9 | 5,891 | 44.4 | na | na |
| Black or African American | 38,048 | 61.3 | 27,598 | 61.6 | 10,450 | 60.5 | 1,088 | 60.2 | na | na |
| Native Hawaiian or Other Pacific Islander | 744 | 53.8 | 542 | 53.1 | 202 | 55.4 | 52 | 50.0 | na | na |
| White | 272,545 | 50.8 | 163,836 | 53.0 | 108,709 | 47.4 | 16,972 | 47.1 | na | na |
| More than one race | 15,613 | 54.4 | 9,593 | 56.1 | 6,020 | 51.7 | 519 | 53.2 | na | na |
| Unknown ethnicity and race | 24,166 | 52.1 | 16,396 | 55.1 | 7,770 | 45.9 | 2,937 | 44.9 | na | na |
| Temporary visa holders | 233,613 | 37.2 | 120,858 | 38.7 | 112,755 | 35.6 | 36,795 | 35.9 | na | na |
| Science | 453,691 | 50.0 | 259,795 | 51.7 | 193,896 | 47.7 | 38,503 | 40.1 | 18,819 | 40.2 |
| U.S. citizens and permanent residents[a] | 312,368 | 53.4 | 185,378 | 55.0 | 126,990 | 51.2 | 17,344 | 45.5 | na | na |
| Hispanic or Latino | 38,193 | 58.0 | 24,330 | 60.4 | 13,863 | 53.7 | 1,123 | 48.7 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 1,526 | 59.8 | 902 | 59.2 | 624 | 60.6 | 40 | 55.0 | na | na |
| Asian | 31,482 | 49.6 | 19,529 | 48.4 | 11,953 | 51.6 | 3,029 | 43.5 | na | na |
| Black or African American | 26,450 | 61.6 | 18,996 | 61.5 | 7,454 | 61.8 | 537 | 59.8 | na | na |
| Native Hawaiian or Other Pacific Islander | 542 | 55.4 | 382 | 55.0 | 160 | 56.3 | 28 | 39.3 | na | na |
| White | 186,405 | 51.9 | 103,762 | 53.5 | 82,643 | 49.8 | 10,457 | 45.1 | na | na |
| More than one race | 10,902 | 56.1 | 6,339 | 57.4 | 4,563 | 54.3 | 315 | 53.7 | na | na |
| Unknown ethnicity and race | 16,868 | 52.4 | 11,138 | 55.1 | 5,730 | 47.2 | 1,815 | 43.6 | na | na |
| Temporary visa holders | 141,323 | 42.4 | 74,417 | 43.5 | 66,906 | 41.0 | 21,159 | 35.6 | na | na |
| Agricultural sciences | 9,518 | 55.5 | 5,629 | 57.8 | 3,889 | 52.2 | 1,079 | 42.4 | 645 | 43.9 |
| U.S. citizens and permanent residents[a] | 6,651 | 57.2 | 4,576 | 58.6 | 2,075 | 54.1 | 439 | 49.7 | na | na |
| Hispanic or Latino | 636 | 59.1 | 470 | 61.3 | 166 | 53.0 | 40 | 45.0 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 33 | 48.5 | 23 | 43.5 | 10 | 60.0 | 3 | 66.7 | na | na |
| Asian | 267 | 60.3 | 160 | 60.0 | 107 | 60.7 | 90 | 48.9 | na | na |
| Black or African American | 329 | 61.7 | 227 | 62.1 | 102 | 60.8 | 13 | 23.1 | na | na |

TABLE 2-2

## Citizenship, ethnicity, and race of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields, by sex: 2019

(Number and percent)

| Citizenship, ethnicity, race, and field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| Native Hawaiian or Other Pacific Islander | 16 | 37.5 | 14 | 35.7 | 2 | 50.0 | 0 | - | na | na |
| White | 5,003 | 56.8 | 3,425 | 58.5 | 1,578 | 53.3 | 253 | 53.8 | na | na |
| More than one race | 186 | 60.8 | 134 | 63.4 | 52 | 53.8 | 2 | 50.0 | na | na |
| Unknown ethnicity and race | 181 | 47.0 | 123 | 43.1 | 58 | 55.2 | 38 | 36.8 | na | na |
| Temporary visa holders | 2,867 | 51.8 | 1,053 | 54.7 | 1,814 | 50.1 | 640 | 37.3 | na | na |
| Biological and biomedical sciences | 91,993 | 58.8 | 38,078 | 63.8 | 53,915 | 55.4 | 21,847 | 44.5 | 8,229 | 47.4 |
| U.S. citizens and permanent residents[a] | 73,093 | 59.2 | 32,928 | 63.5 | 40,165 | 55.6 | 9,557 | 48.9 | na | na |
| Hispanic or Latino | 8,450 | 59.0 | 3,817 | 64.0 | 4,633 | 54.8 | 671 | 49.9 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 276 | 62.7 | 120 | 65.8 | 156 | 60.3 | 22 | 50.0 | na | na |
| Asian | 8,819 | 58.4 | 4,197 | 62.1 | 4,622 | 55.0 | 1,903 | 46.1 | na | na |
| Black or African American | 5,270 | 67.0 | 3,210 | 68.8 | 2,060 | 64.1 | 307 | 62.2 | na | na |
| Native Hawaiian or Other Pacific Islander | 147 | 56.5 | 92 | 55.4 | 55 | 58.2 | 10 | 30.0 | na | na |
| White | 43,821 | 58.5 | 18,281 | 62.9 | 25,540 | 55.3 | 5,590 | 48.9 | na | na |
| More than one race | 2,630 | 60.8 | 1,193 | 64.2 | 1,437 | 57.9 | 160 | 59.4 | na | na |
| Unknown ethnicity and race | 3,680 | 57.4 | 2,018 | 62.2 | 1,662 | 51.5 | 894 | 47.9 | na | na |
| Temporary visa holders | 18,900 | 57.5 | 5,150 | 65.3 | 13,750 | 54.6 | 12,290 | 41.1 | na | na |
| Computer and information sciences | 101,284 | 31.1 | 84,092 | 32.1 | 17,192 | 26.3 | 878 | 21.4 | 510 | 23.9 |
| U.S. citizens and permanent residents[a] | 47,109 | 27.9 | 40,769 | 28.2 | 6,340 | 26.0 | 313 | 26.5 | na | na |
| Hispanic or Latino | 4,203 | 26.5 | 3,777 | 26.8 | 426 | 23.5 | 11 | 27.3 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 119 | 33.6 | 108 | 32.4 | 11 | 45.5 | 1 | 0.0 | na | na |
| Asian | 9,343 | 31.4 | 8,274 | 31.6 | 1,069 | 29.8 | 67 | 32.8 | na | na |
| Black or African American | 5,247 | 36.4 | 4,803 | 36.5 | 444 | 35.1 | 7 | 42.9 | na | na |
| Native Hawaiian or Other Pacific Islander | 69 | 31.9 | 58 | 29.3 | 11 | 45.5 | 0 | - | na | na |
| White | 23,620 | 24.2 | 19,908 | 24.3 | 3,712 | 23.8 | 179 | 23.5 | na | na |

TABLE 2-2

## Citizenship, ethnicity, and race of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields, by sex: 2019

(Number and percent)

| Citizenship, ethnicity, race, and field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| More than one race | 1,587 | 30.4 | 1,347 | 31.1 | 240 | 26.7 | 5 | 20.0 | na | na |
| Unknown ethnicity and race | 2,921 | 31.2 | 2,494 | 32.0 | 427 | 26.9 | 43 | 27.9 | na | na |
| Temporary visa holders | 54,175 | 33.8 | 43,323 | 35.7 | 10,852 | 26.4 | 565 | 18.6 | na | na |
| Geosciences, atmospheric sciences, and ocean sciences | 11,878 | 47.5 | 5,327 | 48.4 | 6,551 | 46.8 | 1,778 | 38.2 | 2,177 | 31.0 |
| U.S. citizens and permanent residents[a] | 9,326 | 49.9 | 4,841 | 48.9 | 4,485 | 50.9 | 871 | 45.1 | na | na |
| Hispanic or Latino | 882 | 53.1 | 472 | 51.1 | 410 | 55.4 | 56 | 44.6 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 39 | 51.3 | 22 | 45.5 | 17 | 58.8 | 1 | 100.0 | na | na |
| Asian | 377 | 58.1 | 133 | 60.9 | 244 | 56.6 | 90 | 33.3 | na | na |
| Black or African American | 258 | 52.3 | 152 | 52.0 | 106 | 52.8 | 15 | 46.7 | na | na |
| Native Hawaiian or Other Pacific Islander | 9 | 44.4 | 7 | 42.9 | 2 | 50.0 | 1 | 100.0 | na | na |
| White | 7,080 | 48.6 | 3,722 | 47.9 | 3,358 | 49.3 | 589 | 45.7 | na | na |
| More than one race | 320 | 60.3 | 154 | 53.2 | 166 | 66.9 | 29 | 65.5 | na | na |
| Unknown ethnicity and race | 361 | 48.2 | 179 | 48.0 | 182 | 48.4 | 90 | 45.6 | na | na |
| Temporary visa holders | 2,552 | 38.9 | 486 | 43.6 | 2,066 | 37.8 | 907 | 31.5 | na | na |
| Mathematics and statistics | 33,159 | 37.4 | 19,594 | 43.1 | 13,565 | 29.1 | 1,070 | 25.3 | 305 | 29.8 |
| U.S. citizens and permanent residents[a] | 16,250 | 33.5 | 9,639 | 37.8 | 6,611 | 27.1 | 480 | 25.0 | na | na |
| Hispanic or Latino | 1,679 | 33.5 | 1,123 | 36.8 | 556 | 27.0 | 25 | 32.0 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 57 | 33.3 | 42 | 35.7 | 15 | 26.7 | 0 | - | na | na |
| Asian | 2,391 | 40.0 | 1,619 | 44.3 | 772 | 31.1 | 70 | 32.9 | na | na |
| Black or African American | 716 | 39.4 | 519 | 42.6 | 197 | 31.0 | 9 | 44.4 | na | na |
| Native Hawaiian or Other Pacific Islander | 7 | 28.6 | 5 | 20.0 | 2 | 50.0 | 1 | 100.0 | na | na |
| White | 9,913 | 31.5 | 5,425 | 35.6 | 4,488 | 26.4 | 323 | 23.2 | na | na |
| More than one race | 486 | 31.5 | 256 | 36.3 | 230 | 26.1 | 10 | 20.0 | na | na |
| Unknown ethnicity and race | 1,001 | 34.3 | 650 | 39.4 | 351 | 24.8 | 42 | 16.7 | na | na |

TABLE 2-2

## Citizenship, ethnicity, and race of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields, by sex: 2019

(Number and percent)

| Citizenship, ethnicity, race, and field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| Temporary visa holders | 16,909 | 41.2 | 9,955 | 48.3 | 6,954 | 31.1 | 590 | 25.6 | na | na |
| Multidisciplinary and interdisciplinary studies | 11,181 | 53.0 | 8,203 | 53.6 | 2,978 | 51.3 | 972 | 43.9 | 820 | 35.0 |
| U.S. citizens and permanent residents[a] | 8,114 | 54.6 | 6,015 | 55.1 | 2,099 | 53.2 | 512 | 51.6 | na | na |
| Hispanic or Latino | 935 | 57.6 | 734 | 59.5 | 201 | 50.7 | 23 | 47.8 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 36 | 61.1 | 21 | 61.9 | 15 | 60.0 | 4 | 50.0 | na | na |
| Asian | 880 | 55.1 | 686 | 54.7 | 194 | 56.7 | 62 | 48.4 | na | na |
| Black or African American | 788 | 62.4 | 619 | 62.7 | 169 | 61.5 | 23 | 65.2 | na | na |
| Native Hawaiian or Other Pacific Islander | 20 | 60.0 | 13 | 61.5 | 7 | 57.1 | 2 | 0.0 | na | na |
| White | 4,807 | 52.4 | 3,450 | 52.5 | 1,357 | 52.2 | 346 | 50.9 | na | na |
| More than one race | 292 | 57.9 | 231 | 58.0 | 61 | 57.4 | 7 | 57.1 | na | na |
| Unknown ethnicity and race | 356 | 54.2 | 261 | 57.1 | 95 | 46.3 | 45 | 57.8 | na | na |
| Temporary visa holders | 3,067 | 48.8 | 2,188 | 49.5 | 879 | 47.0 | 460 | 35.4 | na | na |
| Natural resources and conservation | 11,743 | 56.9 | 8,066 | 57.9 | 3,677 | 54.7 | 806 | 46.9 | 582 | 38.3 |
| U.S. citizens and permanent residents[a] | 10,040 | 57.9 | 7,250 | 58.0 | 2,790 | 57.5 | 514 | 49.8 | na | na |
| Hispanic or Latino | 989 | 61.7 | 691 | 62.5 | 298 | 59.7 | 18 | 61.1 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 122 | 64.8 | 86 | 59.3 | 36 | 77.8 | 1 | 100.0 | na | na |
| Asian | 358 | 64.2 | 230 | 65.2 | 128 | 62.5 | 30 | 36.7 | na | na |
| Black or African American | 364 | 64.0 | 216 | 61.1 | 148 | 68.2 | 20 | 65.0 | na | na |
| Native Hawaiian or Other Pacific Islander | 23 | 69.6 | 21 | 71.4 | 2 | 50.0 | 3 | 33.3 | na | na |
| White | 7,388 | 56.5 | 5,442 | 56.7 | 1,946 | 55.9 | 349 | 49.3 | na | na |
| More than one race | 355 | 61.7 | 273 | 63.0 | 82 | 57.3 | 8 | 25.0 | na | na |
| Unknown ethnicity and race | 441 | 57.1 | 291 | 58.4 | 150 | 54.7 | 85 | 52.9 | na | na |
| Temporary visa holders | 1,703 | 51.4 | 816 | 57.4 | 887 | 46.0 | 292 | 41.8 | na | na |
| Physical sciences | 42,867 | 34.6 | 6,361 | 38.5 | 36,506 | 34.0 | 7,159 | 23.7 | 3,316 | 20.3 |

TABLE 2-2

## Citizenship, ethnicity, and race of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields, by sex: 2019

(Number and percent)

| Citizenship, ethnicity, race, and field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| U.S. citizens and permanent residents[a] | 26,087 | 35.2 | 4,658 | 39.7 | 21,429 | 34.2 | 2,639 | 26.8 | na | na |
| Hispanic or Latino | 2,792 | 36.7 | 698 | 39.1 | 2,094 | 35.9 | 131 | 32.1 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 89 | 39.3 | 26 | 57.7 | 63 | 31.7 | 4 | 50.0 | na | na |
| Asian | 2,400 | 40.7 | 439 | 42.6 | 1,961 | 40.3 | 523 | 28.3 | na | na |
| Black or African American | 1,063 | 48.4 | 335 | 51.6 | 728 | 46.8 | 48 | 29.2 | na | na |
| Native Hawaiian or Other Pacific Islander | 21 | 33.3 | 6 | 33.3 | 15 | 33.3 | 1 | 0.0 | na | na |
| White | 17,826 | 33.6 | 2,799 | 38.1 | 15,027 | 32.8 | 1,550 | 25.4 | na | na |
| More than one race | 875 | 36.0 | 165 | 38.2 | 710 | 35.5 | 50 | 38.0 | na | na |
| Unknown ethnicity and race | 1,021 | 30.7 | 190 | 35.3 | 831 | 29.6 | 332 | 26.5 | na | na |
| Temporary visa holders | 16,780 | 33.8 | 1,703 | 35.2 | 15,077 | 33.6 | 4,520 | 21.9 | na | na |
| Psychology | 61,069 | 77.9 | 40,838 | 80.3 | 20,231 | 73.0 | 1,152 | 58.9 | 576 | 61.1 |
| U.S. citizens and permanent residents[a] | 57,444 | 78.1 | 39,230 | 80.4 | 18,214 | 73.2 | 820 | 62.2 | na | na |
| Hispanic or Latino | 9,931 | 79.2 | 7,361 | 81.7 | 2,570 | 72.3 | 65 | 63.1 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 276 | 76.8 | 181 | 81.2 | 95 | 68.4 | 0 | - | na | na |
| Asian | 3,016 | 77.5 | 1,795 | 78.9 | 1,221 | 75.5 | 86 | 74.4 | na | na |
| Black or African American | 6,184 | 80.8 | 4,709 | 82.3 | 1,475 | 76.3 | 15 | 66.7 | na | na |
| Native Hawaiian or Other Pacific Islander | 111 | 76.6 | 87 | 75.9 | 24 | 79.2 | 0 | - | na | na |
| White | 32,160 | 77.3 | 20,798 | 79.9 | 11,362 | 72.7 | 550 | 59.6 | na | na |
| More than one race | 2,117 | 76.9 | 1,336 | 79.1 | 781 | 73.1 | 10 | 70.0 | na | na |
| Unknown ethnicity and race | 3,649 | 78.0 | 2,963 | 78.7 | 686 | 74.9 | 94 | 63.8 | na | na |
| Temporary visa holders | 3,625 | 74.4 | 1,608 | 78.3 | 2,017 | 71.2 | 332 | 50.6 | na | na |
| Social sciences | 78,999 | 54.2 | 43,607 | 56.1 | 35,392 | 52.0 | 1,762 | 52.8 | 1,659 | 57.9 |
| U.S. citizens and permanent residents[a] | 58,254 | 55.6 | 35,472 | 56.1 | 22,782 | 54.8 | 1,199 | 55.8 | na | na |
| Hispanic or Latino | 7,696 | 59.6 | 5,187 | 60.4 | 2,509 | 58.0 | 83 | 63.9 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |

TABLE 2-2

## Citizenship, ethnicity, and race of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields, by sex: 2019

(Number and percent)

| Citizenship, ethnicity, race, and field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| American Indian or Alaska Native | 479 | 61.8 | 273 | 58.2 | 206 | 66.5 | 4 | 75.0 | na | na |
| Asian | 3,631 | 59.5 | 1,996 | 60.2 | 1,635 | 58.7 | 108 | 63.9 | na | na |
| Black or African American | 6,231 | 64.1 | 4,206 | 64.6 | 2,025 | 63.3 | 80 | 76.3 | na | na |
| Native Hawaiian or Other Pacific Islander | 119 | 52.9 | 79 | 53.2 | 40 | 52.5 | 10 | 50.0 | na | na |
| White | 34,787 | 52.9 | 20,512 | 53.1 | 14,275 | 52.7 | 728 | 53.3 | na | na |
| More than one race | 2,054 | 60.6 | 1,250 | 61.4 | 804 | 59.3 | 34 | 55.9 | na | na |
| Unknown ethnicity and race | 3,257 | 49.5 | 1,969 | 49.3 | 1,288 | 49.7 | 152 | 46.7 | na | na |
| Temporary visa holders | 20,745 | 50.5 | 8,135 | 56.2 | 12,610 | 46.8 | 563 | 46.5 | na | na |
| Engineering | 164,004 | 26.3 | 91,939 | 26.0 | 72,065 | 26.8 | 8,266 | 24.0 | 3,909 | 23.5 |
| U.S. citizens and permanent residents[a] | 79,982 | 26.5 | 49,873 | 24.7 | 30,109 | 29.4 | 2,689 | 28.9 | na | na |
| Hispanic or Latino | 8,643 | 27.6 | 5,846 | 26.3 | 2,797 | 30.4 | 125 | 27.2 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 242 | 35.5 | 168 | 33.3 | 74 | 40.5 | 10 | 60.0 | na | na |
| Asian | 11,390 | 30.3 | 7,009 | 28.6 | 4,381 | 33.1 | 718 | 26.7 | na | na |
| Black or African American | 4,220 | 30.8 | 2,708 | 28.0 | 1,512 | 35.8 | 70 | 40.0 | na | na |
| Native Hawaiian or Other Pacific Islander | 95 | 26.3 | 69 | 20.3 | 26 | 42.3 | 1 | 0.0 | na | na |
| White | 48,892 | 24.7 | 30,121 | 23.0 | 18,771 | 27.5 | 1,415 | 30.5 | na | na |
| More than one race | 2,773 | 31.0 | 1,672 | 28.8 | 1,101 | 34.4 | 36 | 27.8 | na | na |
| Unknown ethnicity and race | 3,727 | 26.3 | 2,280 | 24.3 | 1,447 | 29.5 | 314 | 24.2 | na | na |
| Temporary visa holders | 84,022 | 26.2 | 42,066 | 27.4 | 41,956 | 25.0 | 5,577 | 21.6 | na | na |
| Health | 72,422 | 76.2 | 56,494 | 78.5 | 15,928 | 68.0 | 19,478 | 49.6 | 7,621 | 51.0 |
| U.S. citizens and permanent residents[a] | 64,154 | 78.0 | 52,119 | 79.6 | 12,035 | 71.3 | 9,419 | 55.3 | na | na |
| Hispanic or Latino | 7,631 | 77.1 | 6,601 | 78.4 | 1,030 | 68.5 | 676 | 56.2 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 309 | 80.3 | 257 | 79.8 | 52 | 82.7 | 19 | 68.4 | na | na |
| Asian | 5,972 | 72.5 | 4,763 | 74.3 | 1,209 | 65.5 | 2,144 | 51.4 | na | na |
| Black or African American | 7,378 | 77.6 | 5,894 | 77.4 | 1,484 | 78.7 | 481 | 63.6 | na | na |
| Native Hawaiian or Other Pacific Islander | 107 | 70.1 | 91 | 70.3 | 16 | 68.8 | 23 | 65.2 | na | na |
| White | 37,248 | 79.2 | 29,953 | 81.2 | 7,295 | 70.8 | 5,100 | 55.8 | na | na |

TABLE 2-2

## Citizenship, ethnicity, and race of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields, by sex: 2019

(Number and percent)

| Citizenship, ethnicity, race, and field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| More than one race | 1,938 | 78.4 | 1,582 | 79.6 | 356 | 72.8 | 168 | 57.7 | na | na |
| Unknown ethnicity and race | 3,571 | 77.5 | 2,978 | 78.4 | 593 | 72.8 | 808 | 55.7 | na | na |
| Temporary visa holders | 8,268 | 61.7 | 4,375 | 65.2 | 3,893 | 57.7 | 10,059 | 44.2 | na | na |
| Clinical medicine[b] | 30,822 | 75.1 | 26,251 | 76.0 | 4,571 | 70.0 | 16,650 | 49.0 | 6,273 | 50.2 |
| U.S. citizens and permanent residents[a] | 27,556 | 76.3 | 23,932 | 76.9 | 3,624 | 72.4 | 7,916 | 53.8 | na | na |
| Hispanic or Latino | 3,433 | 75.5 | 3,004 | 76.2 | 429 | 70.2 | 580 | 54.8 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 177 | 80.2 | 156 | 78.8 | 21 | 90.5 | 16 | 62.5 | na | na |
| Asian | 3,119 | 72.7 | 2,743 | 72.8 | 376 | 71.5 | 1,853 | 51.5 | na | na |
| Black or African American | 4,393 | 78.5 | 3,799 | 78.8 | 594 | 77.1 | 407 | 63.9 | na | na |
| Native Hawaiian or Other Pacific Islander | 56 | 78.6 | 46 | 76.1 | 10 | 90.0 | 20 | 60.0 | na | na |
| White | 13,614 | 76.4 | 11,703 | 77.3 | 1,911 | 71.1 | 4,241 | 53.9 | na | na |
| More than one race | 971 | 79.3 | 842 | 78.7 | 129 | 82.9 | 142 | 52.8 | na | na |
| Unknown ethnicity and race | 1,793 | 75.5 | 1,639 | 76.3 | 154 | 66.2 | 657 | 53.0 | na | na |
| Temporary visa holders | 3,266 | 65.4 | 2,319 | 67.2 | 947 | 61.0 | 8,734 | 44.6 | na | na |
| Other health | 41,600 | 76.9 | 30,243 | 80.6 | 11,357 | 67.1 | 2,828 | 53.0 | 1,348 | 54.7 |
| U.S. citizens and permanent residents[a] | 36,598 | 79.3 | 28,187 | 81.9 | 8,411 | 70.8 | 1,503 | 63.1 | na | na |
| Hispanic or Latino | 4,198 | 78.4 | 3,597 | 80.3 | 601 | 67.4 | 96 | 64.6 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 132 | 80.3 | 101 | 81.2 | 31 | 77.4 | 3 | 100.0 | na | na |
| Asian | 2,853 | 72.3 | 2,020 | 76.3 | 833 | 62.8 | 291 | 50.9 | na | na |
| Black or African American | 2,985 | 76.3 | 2,095 | 74.9 | 890 | 79.8 | 74 | 62.2 | na | na |
| Native Hawaiian or Other Pacific Islander | 51 | 60.8 | 45 | 64.4 | 6 | 33.3 | 3 | 100.0 | na | na |
| White | 23,634 | 80.8 | 18,250 | 83.8 | 5,384 | 70.7 | 859 | 65.5 | na | na |
| More than one race | 967 | 77.5 | 740 | 80.7 | 227 | 67.0 | 26 | 84.6 | na | na |
| Unknown ethnicity and race | 1,778 | 79.5 | 1,339 | 81.0 | 439 | 75.2 | 151 | 67.5 | na | na |
| Temporary visa holders | 5,002 | 59.3 | 2,056 | 63.0 | 2,946 | 56.7 | 1,325 | 41.4 | na | na |

- = not calculable. na = not applicable; citizenship and race and ethnicity data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified (nec). Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 2-3

## Demographic characteristics of master's and doctoral students in science, engineering and health, by enrollment intensity: 2019

(Number and percent)

| | Full time | | | | | | | | | | | | Part time | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All full time | | | | | | First time, full time | | | | | | | | | | | |
| | Total | | Master's | | Doctoral | | All first time, full time | | Master's | | Doctoral | | All part time | | Master's | | Doctoral | |
| Sex, citizenship, ethnicity, and race | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All individuals | 502,442 | 100.0 | 254,532 | 100.0 | 247,910 | 100.0 | 163,032 | 100.0 | 116,507 | 100.0 | 46,525 | 100.0 | 187,675 | 100.0 | 153,696 | 100.0 | 33,979 | 100.0 |
| Male | 263,941 | 52.5 | 123,385 | 48.5 | 140,556 | 56.7 | 81,974 | 50.3 | 56,573 | 48.6 | 25,401 | 54.6 | 101,054 | 53.8 | 82,383 | 53.6 | 18,671 | 54.9 |
| Female | 238,501 | 47.5 | 131,147 | 51.5 | 107,354 | 43.3 | 81,058 | 49.7 | 59,934 | 51.4 | 21,124 | 45.4 | 86,621 | 46.2 | 71,313 | 46.4 | 15,308 | 45.1 |
| U.S. citizens and permanent residents[a] | 297,997 | 59.3 | 154,190 | 60.6 | 143,807 | 58.0 | 96,074 | 58.9 | 68,897 | 59.1 | 27,177 | 58.4 | 158,507 | 84.5 | 133,180 | 86.7 | 25,327 | 74.5 |
| Hispanic or Latino | 35,983 | 7.2 | 20,595 | 8.1 | 15,388 | 6.2 | 12,301 | 7.5 | 9,034 | 7.8 | 3,267 | 7.0 | 18,484 | 9.8 | 16,182 | 10.5 | 2,302 | 6.8 |
| Not Hispanic or Latino | | | | | | | | | | | | | | | | | | |
| American Indian or Alaska Native | 1,359 | 0.3 | 746 | 0.3 | 613 | 0.2 | 429 | 0.3 | 314 | 0.3 | 115 | 0.2 | 718 | 0.4 | 581 | 0.4 | 137 | 0.4 |
| Asian | 32,316 | 6.4 | 16,900 | 6.6 | 15,416 | 6.2 | 11,495 | 7.1 | 8,487 | 7.3 | 3,008 | 6.5 | 16,528 | 8.8 | 14,401 | 9.4 | 2,127 | 6.3 |
| Black or African American | 21,955 | 4.4 | 13,983 | 5.5 | 7,972 | 3.2 | 7,825 | 4.8 | 6,188 | 5.3 | 1,637 | 3.5 | 16,093 | 8.6 | 13,615 | 8.9 | 2,478 | 7.3 |
| Native Hawaiian or Other Pacific Islander | 444 | 0.1 | 285 | 0.1 | 159 | 0.1 | 160 | 0.1 | 136 | 0.1 | 24 | 0.1 | 300 | 0.2 | 257 | 0.2 | 43 | 0.1 |
| White | 181,065 | 36.0 | 88,477 | 34.8 | 92,588 | 37.3 | 56,122 | 34.4 | 39,055 | 33.5 | 17,067 | 36.7 | 91,480 | 48.7 | 75,359 | 49.0 | 16,121 | 47.4 |
| More than one race | 10,827 | 2.2 | 5,548 | 2.2 | 5,279 | 2.1 | 3,545 | 2.2 | 2,498 | 2.1 | 1,047 | 2.3 | 4,786 | 2.6 | 4,045 | 2.6 | 741 | 2.2 |
| Unknown ethnicity and race | 14,048 | 2.8 | 7,656 | 3.0 | 6,392 | 2.6 | 4,197 | 2.6 | 3,185 | 2.7 | 1,012 | 2.2 | 10,118 | 5.4 | 8,740 | 5.7 | 1,378 | 4.1 |
| Temporary visa holders | 204,445 | 40.7 | 100,342 | 39.4 | 104,103 | 42.0 | 66,958 | 41.1 | 47,610 | 40.9 | 19,348 | 41.6 | 29,168 | 15.5 | 20,516 | 13.3 | 8,652 | 25.5 |
| Male | | | | | | | | | | | | | | | | | | |
| U.S. citizens and permanent residents[a] | 135,890 | 27.0 | 62,191 | 24.4 | 73,699 | 29.7 | 41,371 | 25.4 | 28,005 | 24.0 | 13,366 | 28.7 | 82,447 | 43.9 | 69,495 | 45.2 | 12,952 | 38.1 |
| Hispanic or Latino | 15,240 | 3.0 | 7,630 | 3.0 | 7,610 | 3.1 | 4,952 | 3.0 | 3,360 | 2.9 | 1,592 | 3.4 | 8,824 | 4.7 | 7,748 | 5.0 | 1,076 | 3.2 |
| Not Hispanic or Latino | | | | | | | | | | | | | | | | | | |
| American Indian or Alaska Native | 538 | 0.1 | 289 | 0.1 | 249 | 0.1 | 162 | 0.1 | 117 | 0.1 | 45 | 0.1 | 293 | 0.2 | 243 | 0.2 | 50 | 0.1 |
| Asian | 15,906 | 3.2 | 7,908 | 3.1 | 7,998 | 3.2 | 5,495 | 3.4 | 3,989 | 3.4 | 1,506 | 3.2 | 9,547 | 5.1 | 8,407 | 5.5 | 1,140 | 3.4 |
| Black or African American | 7,761 | 1.5 | 4,648 | 1.8 | 3,113 | 1.3 | 2,640 | 1.6 | 2,021 | 1.7 | 619 | 1.3 | 6,964 | 3.7 | 5,945 | 3.9 | 1,019 | 3.0 |
| Native Hawaiian or Other Pacific Islander | 196 | * | 125 | * | 71 | * | 72 | * | 58 | * | 14 | * | 148 | 0.1 | 129 | 0.1 | 19 | 0.1 |
| White | 84,915 | 16.9 | 36,277 | 14.3 | 48,638 | 19.6 | 24,721 | 15.2 | 16,136 | 13.8 | 8,585 | 18.5 | 49,312 | 26.3 | 40,756 | 26.5 | 8,556 | 25.2 |
| More than one race | 4,768 | 0.9 | 2,215 | 0.9 | 2,553 | 1.0 | 1,511 | 0.9 | 1,017 | 0.9 | 494 | 1.1 | 2,350 | 1.3 | 1,998 | 1.3 | 352 | 1.0 |
| Unknown ethnicity and race | 6,566 | 1.3 | 3,099 | 1.2 | 3,467 | 1.4 | 1,818 | 1.1 | 1,307 | 1.1 | 511 | 1.1 | 5,009 | 2.7 | 4,269 | 2.8 | 740 | 2.2 |
| Temporary visa holders | 128,051 | 25.5 | 61,194 | 24.0 | 66,857 | 27.0 | 40,603 | 24.9 | 28,568 | 24.5 | 12,035 | 25.9 | 18,607 | 9.9 | 12,888 | 8.4 | 5,719 | 16.8 |
| Female | | | | | | | | | | | | | | | | | | |
| U.S. citizens and permanent residents[a] | 162,107 | 32.3 | 91,999 | 36.1 | 70,108 | 28.3 | 54,703 | 33.6 | 40,892 | 35.1 | 13,811 | 29.7 | 76,060 | 40.5 | 63,685 | 41.4 | 12,375 | 36.4 |
| Hispanic or Latino | 20,743 | 4.1 | 12,965 | 5.1 | 7,778 | 3.1 | 7,349 | 4.5 | 5,674 | 4.9 | 1,675 | 3.6 | 9,660 | 5.1 | 8,434 | 5.5 | 1,226 | 3.6 |
| Not Hispanic or Latino | | | | | | | | | | | | | | | | | | |
| American Indian or Alaska Native | 821 | 0.2 | 457 | 0.2 | 364 | 0.1 | 267 | 0.2 | 197 | 0.2 | 70 | 0.2 | 425 | 0.2 | 338 | 0.2 | 87 | 0.3 |
| Asian | 16,410 | 3.3 | 8,992 | 3.5 | 7,418 | 3.0 | 6,000 | 3.7 | 4,498 | 3.9 | 1,502 | 3.2 | 6,981 | 3.7 | 5,994 | 3.9 | 987 | 2.9 |
| Black or African American | 14,194 | 2.8 | 9,335 | 3.7 | 4,859 | 2.0 | 5,185 | 3.2 | 4,167 | 3.6 | 1,018 | 2.2 | 9,129 | 4.9 | 7,670 | 5.0 | 1,459 | 4.3 |

TABLE 2-3

## Demographic characteristics of master's and doctoral students in science, engineering and health, by enrollment intensity: 2019

(Number and percent)

| | Full time | | | | | | | | | | | | Part time | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All full time | | | | | | First time, full time | | | | | | | | | | | |
| | Total | | Master's | | Doctoral | | All first time, full time | | Master's | | Doctoral | | All part time | | Master's | | Doctoral | |
| Sex, citizenship, ethnicity, and race | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Native Hawaiian or Other Pacific Islander | 248 | * | 160 | 0.1 | 88 | * | 88 | 0.1 | 78 | 0.1 | 10 | * | 152 | 0.1 | 128 | 0.1 | 24 | 0.1 |
| White | 96,150 | 19.1 | 52,200 | 20.5 | 43,950 | 17.7 | 31,401 | 19.3 | 22,919 | 19.7 | 8,482 | 18.2 | 42,168 | 22.5 | 34,603 | 22.5 | 7,565 | 22.3 |
| More than one race | 6,059 | 1.2 | 3,333 | 1.3 | 2,726 | 1.1 | 2,034 | 1.2 | 1,481 | 1.3 | 553 | 1.2 | 2,436 | 1.3 | 2,047 | 1.3 | 389 | 1.1 |
| Unknown ethnicity and race | 7,482 | 1.5 | 4,557 | 1.8 | 2,925 | 1.2 | 2,379 | 1.5 | 1,878 | 1.6 | 501 | 1.1 | 5,109 | 2.7 | 4,471 | 2.9 | 638 | 1.9 |
| Temporary visa holders | 76,394 | 15.2 | 39,148 | 15.4 | 37,246 | 15.0 | 26,355 | 16.2 | 19,042 | 16.3 | 7,313 | 15.7 | 10,561 | 5.6 | 7,628 | 5.0 | 2,933 | 8.6 |

* = value < 0.05%.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 2-4

## Graduate students in science, engineering, and health broad fields, by degree program, citizenship, ethnicity, and race: 2019

(Number and percent)

| Broad field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All graduate students | 690,117 | 100.0 | 54,467 | 100.0 | 2,077 | 100.0 | 48,844 | 100.0 | 38,048 | 100.0 | 744 | 100.0 | 272,545 | 100.0 | 15,613 | 100.0 | 24,166 | 100.0 | 233,613 | 100.0 |
| Science | 453,691 | 65.7 | 38,193 | 70.1 | 1,526 | 73.5 | 31,482 | 64.5 | 26,450 | 69.5 | 542 | 72.8 | 186,405 | 68.4 | 10,902 | 69.8 | 16,868 | 69.8 | 141,323 | 60.5 |
| Agricultural sciences | 9,518 | 1.4 | 636 | 1.2 | 33 | 1.6 | 267 | 0.5 | 329 | 0.9 | 16 | 2.2 | 5,003 | 1.8 | 186 | 1.2 | 181 | 0.7 | 2,867 | 1.2 |
| Biological and biomedical sciences | 91,993 | 13.3 | 8,450 | 15.5 | 276 | 13.3 | 8,819 | 18.1 | 5,270 | 13.9 | 147 | 19.8 | 43,821 | 16.1 | 2,630 | 16.8 | 3,680 | 15.2 | 18,900 | 8.1 |
| Computer and information sciences | 101,284 | 14.7 | 4,203 | 7.7 | 119 | 5.7 | 9,343 | 19.1 | 5,247 | 13.8 | 69 | 9.3 | 23,620 | 8.7 | 1,587 | 10.2 | 2,921 | 12.1 | 54,175 | 23.2 |
| Geosciences, atmospheric sciences, and ocean sciences | 11,878 | 1.7 | 882 | 1.6 | 39 | 1.9 | 377 | 0.8 | 258 | 0.7 | 9 | 1.2 | 7,080 | 2.6 | 320 | 2.0 | 361 | 1.5 | 2,552 | 1.1 |
| Mathematics and statistics | 33,159 | 4.8 | 1,679 | 3.1 | 57 | 2.7 | 2,391 | 4.9 | 716 | 1.9 | 7 | 0.9 | 9,913 | 3.6 | 486 | 3.1 | 1,001 | 4.1 | 16,909 | 7.2 |
| Multidisciplinary and interdisciplinary studies | 11,181 | 1.6 | 935 | 1.7 | 36 | 1.7 | 880 | 1.8 | 788 | 2.1 | 20 | 2.7 | 4,807 | 1.8 | 292 | 1.9 | 356 | 1.5 | 3,067 | 1.3 |
| Natural resources and conservation | 11,743 | 1.7 | 989 | 1.8 | 122 | 5.9 | 358 | 0.7 | 364 | 1.0 | 23 | 3.1 | 7,388 | 2.7 | 355 | 2.3 | 441 | 1.8 | 1,703 | 0.7 |
| Physical sciences | 42,867 | 6.2 | 2,792 | 5.1 | 89 | 4.3 | 2,400 | 4.9 | 1,063 | 2.8 | 21 | 2.8 | 17,826 | 6.5 | 875 | 5.6 | 1,021 | 4.2 | 16,780 | 7.2 |
| Psychology | 61,069 | 8.8 | 9,931 | 18.2 | 276 | 13.3 | 3,016 | 6.2 | 6,184 | 16.3 | 111 | 14.9 | 32,160 | 11.8 | 2,117 | 13.6 | 3,649 | 15.1 | 3,625 | 1.6 |
| Social sciences | 78,999 | 11.4 | 7,696 | 14.1 | 479 | 23.1 | 3,631 | 7.4 | 6,231 | 16.4 | 119 | 16.0 | 34,787 | 12.8 | 2,054 | 13.2 | 3,257 | 13.5 | 20,745 | 8.9 |
| Engineering | 164,004 | 23.8 | 8,643 | 15.9 | 242 | 11.7 | 11,390 | 23.3 | 4,220 | 11.1 | 95 | 12.8 | 48,892 | 17.9 | 2,773 | 17.8 | 3,727 | 15.4 | 84,022 | 36.0 |
| Health | 72,422 | 10.5 | 7,631 | 14.0 | 309 | 14.9 | 5,972 | 12.2 | 7,378 | 19.4 | 107 | 14.4 | 37,248 | 13.7 | 1,938 | 12.4 | 3,571 | 14.8 | 8,268 | 3.5 |
| Clinical medicine[a] | 30,822 | 4.5 | 3,433 | 6.3 | 177 | 8.5 | 3,119 | 6.4 | 4,393 | 11.5 | 56 | 7.5 | 13,614 | 5.0 | 971 | 6.2 | 1,793 | 7.4 | 3,266 | 1.4 |
| Other health | 41,600 | 6.0 | 4,198 | 7.7 | 132 | 6.4 | 2,853 | 5.8 | 2,985 | 7.8 | 51 | 6.9 | 23,634 | 8.7 | 967 | 6.2 | 1,778 | 7.4 | 5,002 | 2.1 |
| Master's students | 408,228 | 59.2 | 36,777 | 67.5 | 1,327 | 63.9 | 31,301 | 64.1 | 27,598 | 72.5 | 542 | 72.8 | 163,836 | 60.1 | 9,593 | 61.4 | 16,396 | 67.8 | 120,858 | 51.7 |
| Science | 259,795 | 37.6 | 24,330 | 44.7 | 902 | 43.4 | 19,529 | 40.0 | 18,996 | 49.9 | 382 | 51.3 | 103,762 | 38.1 | 6,339 | 40.6 | 11,138 | 46.1 | 74,417 | 31.9 |
| Agricultural sciences | 5,629 | 0.8 | 470 | 0.9 | 23 | 1.1 | 160 | 0.3 | 227 | 0.6 | 14 | 1.9 | 3,425 | 1.3 | 134 | 0.9 | 123 | 0.5 | 1,053 | 0.5 |
| Biological and biomedical sciences | 38,078 | 5.5 | 3,817 | 7.0 | 120 | 5.8 | 4,197 | 8.6 | 3,210 | 8.4 | 92 | 12.4 | 18,281 | 6.7 | 1,193 | 7.6 | 2,018 | 8.4 | 5,150 | 2.2 |
| Computer and information sciences | 84,092 | 12.2 | 3,777 | 6.9 | 108 | 5.2 | 8,274 | 16.9 | 4,803 | 12.6 | 58 | 7.8 | 19,908 | 7.3 | 1,347 | 8.6 | 2,494 | 10.3 | 43,323 | 18.5 |
| Geosciences, atmospheric sciences, and ocean sciences | 5,327 | 0.8 | 472 | 0.9 | 22 | 1.1 | 133 | 0.3 | 152 | 0.4 | 7 | 0.9 | 3,722 | 1.4 | 154 | 1.0 | 179 | 0.7 | 486 | 0.2 |
| Mathematics and statistics | 19,594 | 2.8 | 1,123 | 2.1 | 42 | 2.0 | 1,619 | 3.3 | 519 | 1.4 | 5 | 0.7 | 5,425 | 2.0 | 256 | 1.6 | 650 | 2.7 | 9,955 | 4.3 |
| Multidisciplinary and interdisciplinary studies | 8,203 | 1.2 | 734 | 1.3 | 21 | 1.0 | 686 | 1.4 | 619 | 1.6 | 13 | 1.7 | 3,450 | 1.3 | 231 | 1.5 | 261 | 1.1 | 2,188 | 0.9 |
| Natural resources and conservation | 8,066 | 1.2 | 691 | 1.3 | 86 | 4.1 | 230 | 0.5 | 216 | 0.6 | 21 | 2.8 | 5,442 | 2.0 | 273 | 1.7 | 291 | 1.2 | 816 | 0.3 |
| Physical sciences | 6,361 | 0.9 | 698 | 1.3 | 26 | 1.3 | 439 | 0.9 | 335 | 0.9 | 6 | 0.8 | 2,799 | 1.0 | 165 | 1.1 | 190 | 0.8 | 1,703 | 0.7 |
| Psychology | 40,838 | 5.9 | 7,361 | 13.5 | 181 | 8.7 | 1,795 | 3.7 | 4,709 | 12.4 | 87 | 11.7 | 20,798 | 7.6 | 1,336 | 8.6 | 2,963 | 12.3 | 1,608 | 0.7 |
| Social sciences | 43,607 | 6.3 | 5,187 | 9.5 | 273 | 13.1 | 1,996 | 4.1 | 4,206 | 11.1 | 79 | 10.6 | 20,512 | 7.5 | 1,250 | 8.0 | 1,969 | 8.1 | 8,135 | 3.5 |
| Engineering | 91,939 | 13.3 | 5,846 | 10.7 | 168 | 8.1 | 7,009 | 14.3 | 2,708 | 7.1 | 69 | 9.3 | 30,121 | 11.1 | 1,672 | 10.7 | 2,280 | 9.4 | 42,066 | 18.0 |
| Health | 56,494 | 8.2 | 6,601 | 12.1 | 257 | 12.4 | 4,763 | 9.8 | 5,894 | 15.5 | 91 | 12.2 | 29,953 | 11.0 | 1,582 | 10.1 | 2,978 | 12.3 | 4,375 | 1.9 |
| Clinical medicine[a] | 26,251 | 3.8 | 3,004 | 5.5 | 156 | 7.5 | 2,743 | 5.6 | 3,799 | 10.0 | 46 | 6.2 | 11,703 | 4.3 | 842 | 5.4 | 1,639 | 6.8 | 2,319 | 1.0 |
| Other health | 30,243 | 4.4 | 3,597 | 6.6 | 101 | 4.9 | 2,020 | 4.1 | 2,095 | 5.5 | 45 | 6.0 | 18,250 | 6.7 | 740 | 4.7 | 1,339 | 5.5 | 2,056 | 0.9 |
| Doctoral students | 281,889 | 40.8 | 17,690 | 32.5 | 750 | 36.1 | 17,543 | 35.9 | 10,450 | 27.5 | 202 | 27.2 | 108,709 | 39.9 | 6,020 | 38.6 | 7,770 | 32.2 | 112,755 | 48.3 |

TABLE 2-4

## Graduate students in science, engineering, and health broad fields, by degree program, citizenship, ethnicity, and race: 2019

(Number and percent)

| Broad field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Science | 193,896 | 28.1 | 13,863 | 25.5 | 624 | 30.0 | 11,953 | 24.5 | 7,454 | 19.6 | 160 | 21.5 | 82,643 | 30.3 | 4,563 | 29.2 | 5,730 | 23.7 | 66,906 | 28.6 |
| Agricultural sciences | 3,889 | 0.6 | 166 | 0.3 | 10 | 0.5 | 107 | 0.2 | 102 | 0.3 | 2 | 0.3 | 1,578 | 0.6 | 52 | 0.3 | 58 | 0.2 | 1,814 | 0.8 |
| Biological and biomedical sciences | 53,915 | 7.8 | 4,633 | 8.5 | 156 | 7.5 | 4,622 | 9.5 | 2,060 | 5.4 | 55 | 7.4 | 25,540 | 9.4 | 1,437 | 9.2 | 1,662 | 6.9 | 13,750 | 5.9 |
| Computer and information sciences | 17,192 | 2.5 | 426 | 0.8 | 11 | 0.5 | 1,069 | 2.2 | 444 | 1.2 | 11 | 1.5 | 3,712 | 1.4 | 240 | 1.5 | 427 | 1.8 | 10,852 | 4.6 |
| Geosciences, atmospheric sciences, and ocean sciences | 6,551 | 0.9 | 410 | 0.8 | 17 | 0.8 | 244 | 0.5 | 106 | 0.3 | 2 | 0.3 | 3,358 | 1.2 | 166 | 1.1 | 182 | 0.8 | 2,066 | 0.9 |
| Mathematics and statistics | 13,565 | 2.0 | 556 | 1.0 | 15 | 0.7 | 772 | 1.6 | 197 | 0.5 | 2 | 0.3 | 4,488 | 1.6 | 230 | 1.5 | 351 | 1.5 | 6,954 | 3.0 |
| Multidisciplinary and interdisciplinary studies | 2,978 | 0.4 | 201 | 0.4 | 15 | 0.7 | 194 | 0.4 | 169 | 0.4 | 7 | 0.9 | 1,357 | 0.5 | 61 | 0.4 | 95 | 0.4 | 879 | 0.4 |
| Natural resources and conservation | 3,677 | 0.5 | 298 | 0.5 | 36 | 1.7 | 128 | 0.3 | 148 | 0.4 | 2 | 0.3 | 1,946 | 0.7 | 82 | 0.5 | 150 | 0.6 | 887 | 0.4 |
| Physical sciences | 36,506 | 5.3 | 2,094 | 3.8 | 63 | 3.0 | 1,961 | 4.0 | 728 | 1.9 | 15 | 2.0 | 15,027 | 5.5 | 710 | 4.5 | 831 | 3.4 | 15,077 | 6.5 |
| Psychology | 20,231 | 2.9 | 2,570 | 4.7 | 95 | 4.6 | 1,221 | 2.5 | 1,475 | 3.9 | 24 | 3.2 | 11,362 | 4.2 | 781 | 5.0 | 686 | 2.8 | 2,017 | 0.9 |
| Social sciences | 35,392 | 5.1 | 2,509 | 4.6 | 206 | 9.9 | 1,635 | 3.3 | 2,025 | 5.3 | 40 | 5.4 | 14,275 | 5.2 | 804 | 5.1 | 1,288 | 5.3 | 12,610 | 5.4 |
| Engineering | 72,065 | 10.4 | 2,797 | 5.1 | 74 | 3.6 | 4,381 | 9.0 | 1,512 | 4.0 | 26 | 3.5 | 18,771 | 6.9 | 1,101 | 7.1 | 1,447 | 6.0 | 41,956 | 18.0 |
| Health | 15,928 | 2.3 | 1,030 | 1.9 | 52 | 2.5 | 1,209 | 2.5 | 1,484 | 3.9 | 16 | 2.2 | 7,295 | 2.7 | 356 | 2.3 | 593 | 2.5 | 3,893 | 1.7 |
| Clinical medicine[a] | 4,571 | 0.7 | 429 | 0.8 | 21 | 1.0 | 376 | 0.8 | 594 | 1.6 | 10 | 1.3 | 1,911 | 0.7 | 129 | 0.8 | 154 | 0.6 | 947 | 0.4 |
| Other health | 11,357 | 1.6 | 601 | 1.1 | 31 | 1.5 | 833 | 1.7 | 890 | 2.3 | 6 | 0.8 | 5,384 | 2.0 | 227 | 1.5 | 439 | 1.8 | 2,946 | 1.3 |

[a] Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified.

**Note(s):**

Percentages may not add to total because of rounding. Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 3-1

## Primary source of support for full-time graduate students in science, engineering, and health, by field: 2019

(Number and percent)

| Broad field | Total | Federal | | Institutional | | Nonfederal domestic | | Foreign | | Self-support | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All graduate students | 502,442 | 73,605 | 14.6 | 205,890 | 41.0 | 19,171 | 3.8 | 4,699 | 0.9 | 199,077 | 39.6 |
| Science | 331,673 | 46,450 | 14.0 | 148,487 | 44.8 | 10,570 | 3.2 | 2,298 | 0.7 | 123,868 | 37.3 |
| Agricultural sciences | 6,749 | 1,280 | 19.0 | 3,424 | 50.7 | 795 | 11.8 | 87 | 1.3 | 1,163 | 17.2 |
| Biological and biomedical sciences | 76,233 | 18,553 | 24.3 | 34,360 | 45.1 | 3,258 | 4.3 | 496 | 0.7 | 19,566 | 25.7 |
| Computer and information sciences | 62,120 | 5,124 | 8.2 | 16,076 | 25.9 | 1,420 | 2.3 | 469 | 0.8 | 39,031 | 62.8 |
| Geosciences, atmospheric sciences, and ocean sciences | 9,521 | 2,504 | 26.3 | 5,122 | 53.8 | 481 | 5.1 | 96 | 1.0 | 1,318 | 13.8 |
| Mathematics and statistics | 25,681 | 1,463 | 5.7 | 13,152 | 51.2 | 338 | 1.3 | 161 | 0.6 | 10,567 | 41.1 |
| Multidisciplinary and interdisciplinary studies | 7,033 | 497 | 7.1 | 2,708 | 38.5 | 138 | 2.0 | 40 | 0.6 | 3,650 | 51.9 |
| Natural resources and conservation | 8,101 | 1,215 | 15.0 | 3,516 | 43.4 | 429 | 5.3 | 71 | 0.9 | 2,870 | 35.4 |
| Physical sciences | 38,162 | 10,530 | 27.6 | 22,916 | 60.0 | 1,560 | 4.1 | 327 | 0.9 | 2,829 | 7.4 |
| Psychology | 41,093 | 2,469 | 6.0 | 13,950 | 33.9 | 748 | 1.8 | 143 | 0.3 | 23,783 | 57.9 |
| Social sciences | 56,980 | 2,815 | 4.9 | 33,263 | 58.4 | 1,403 | 2.5 | 408 | 0.7 | 19,091 | 33.5 |
| Engineering | 121,117 | 24,012 | 19.8 | 43,902 | 36.2 | 7,407 | 6.1 | 1,996 | 1.6 | 43,800 | 36.2 |
| Health | 49,652 | 3,143 | 6.3 | 13,501 | 27.2 | 1,194 | 2.4 | 405 | 0.8 | 31,409 | 63.3 |
| Clinical medicine[a] | 18,924 | 1,265 | 6.7 | 4,737 | 25.0 | 532 | 2.8 | 111 | 0.6 | 12,279 | 64.9 |
| Other health | 30,728 | 1,878 | 6.1 | 8,764 | 28.5 | 662 | 2.2 | 294 | 1.0 | 19,130 | 62.3 |
| Master's students | 254,532 | 11,491 | 4.5 | 60,153 | 23.6 | 4,914 | 1.9 | 1,517 | 0.6 | 176,457 | 69.3 |
| Science | 158,704 | 6,468 | 4.1 | 39,507 | 24.9 | 2,534 | 1.6 | 844 | 0.5 | 109,351 | 68.9 |
| Agricultural sciences | 3,504 | 537 | 15.3 | 1,650 | 47.1 | 401 | 11.4 | 43 | 1.2 | 873 | 24.9 |
| Biological and biomedical sciences | 25,757 | 1,263 | 4.9 | 6,480 | 25.2 | 423 | 1.6 | 120 | 0.5 | 17,471 | 67.8 |
| Computer and information sciences | 47,535 | 1,061 | 2.2 | 8,299 | 17.5 | 459 | 1.0 | 231 | 0.5 | 37,485 | 78.9 |
| Geosciences, atmospheric sciences, and ocean sciences | 3,675 | 635 | 17.3 | 1,929 | 52.5 | 139 | 3.8 | 32 | 0.9 | 940 | 25.6 |
| Mathematics and statistics | 13,359 | 157 | 1.2 | 3,241 | 24.3 | 95 | 0.7 | 59 | 0.4 | 9,807 | 73.4 |
| Multidisciplinary and interdisciplinary studies | 4,669 | 125 | 2.7 | 1,106 | 23.7 | 65 | 1.4 | 15 | 0.3 | 3,358 | 71.9 |
| Natural resources and conservation | 5,176 | 577 | 11.1 | 1,861 | 36.0 | 218 | 4.2 | 35 | 0.7 | 2,485 | 48.0 |
| Physical sciences | 3,878 | 307 | 7.9 | 1,813 | 46.8 | 87 | 2.2 | 50 | 1.3 | 1,621 | 41.8 |
| Psychology | 24,547 | 628 | 2.6 | 3,600 | 14.7 | 131 | 0.5 | 81 | 0.3 | 20,107 | 81.9 |
| Social sciences | 26,604 | 1,178 | 4.4 | 9,528 | 35.8 | 516 | 1.9 | 178 | 0.7 | 15,204 | 57.1 |
| Engineering | 57,723 | 3,762 | 6.5 | 12,920 | 22.4 | 1,722 | 3.0 | 502 | 0.9 | 38,817 | 67.2 |
| Health | 38,105 | 1,261 | 3.3 | 7,726 | 20.3 | 658 | 1.7 | 171 | 0.4 | 28,289 | 74.2 |
| Clinical medicine[a] | 15,638 | 590 | 3.8 | 3,087 | 19.7 | 349 | 2.2 | 55 | 0.4 | 11,557 | 73.9 |
| Other health | 22,467 | 671 | 3.0 | 4,639 | 20.6 | 309 | 1.4 | 116 | 0.5 | 16,732 | 74.5 |
| Doctoral students | 247,910 | 62,114 | 25.1 | 145,737 | 58.8 | 14,257 | 5.8 | 3,182 | 1.3 | 22,620 | 9.1 |
| Science | 172,969 | 39,982 | 23.1 | 108,980 | 63.0 | 8,036 | 4.6 | 1,454 | 0.8 | 14,517 | 8.4 |
| Agricultural sciences | 3,245 | 743 | 22.9 | 1,774 | 54.7 | 394 | 12.1 | 44 | 1.4 | 290 | 8.9 |
| Biological and biomedical sciences | 50,476 | 17,290 | 34.3 | 27,880 | 55.2 | 2,835 | 5.6 | 376 | 0.7 | 2,095 | 4.2 |
| Computer and information sciences | 14,585 | 4,063 | 27.9 | 7,777 | 53.3 | 961 | 6.6 | 238 | 1.6 | 1,546 | 10.6 |

TABLE 3-1

## Primary source of support for full-time graduate students in science, engineering, and health, by field: 2019

(Number and percent)

| Broad field | Total | Federal | | Institutional | | Nonfederal domestic | | Foreign | | Self-support | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Geosciences, atmospheric sciences, and ocean sciences | 5,846 | 1,869 | 32.0 | 3,193 | 54.6 | 342 | 5.9 | 64 | 1.1 | 378 | 6.5 |
| Mathematics and statistics | 12,322 | 1,306 | 10.6 | 9,911 | 80.4 | 243 | 2.0 | 102 | 0.8 | 760 | 6.2 |
| Multidisciplinary and interdisciplinary studies | 2,364 | 372 | 15.7 | 1,602 | 67.8 | 73 | 3.1 | 25 | 1.1 | 292 | 12.4 |
| Natural resources and conservation | 2,925 | 638 | 21.8 | 1,655 | 56.6 | 211 | 7.2 | 36 | 1.2 | 385 | 13.2 |
| Physical sciences | 34,284 | 10,223 | 29.8 | 21,103 | 61.6 | 1,473 | 4.3 | 277 | 0.8 | 1,208 | 3.5 |
| Psychology | 16,546 | 1,841 | 11.1 | 10,350 | 62.6 | 617 | 3.7 | 62 | 0.4 | 3,676 | 22.2 |
| Social sciences | 30,376 | 1,637 | 5.4 | 23,735 | 78.1 | 887 | 2.9 | 230 | 0.8 | 3,887 | 12.8 |
| Engineering | 63,394 | 20,250 | 31.9 | 30,982 | 48.9 | 5,685 | 9.0 | 1,494 | 2.4 | 4,983 | 7.9 |
| Health | 11,547 | 1,882 | 16.3 | 5,775 | 50.0 | 536 | 4.6 | 234 | 2.0 | 3,120 | 27.0 |
| Clinical medicine[a] | 3,286 | 675 | 20.5 | 1,650 | 50.2 | 183 | 5.6 | 56 | 1.7 | 722 | 22.0 |
| Other health | 8,261 | 1,207 | 14.6 | 4,125 | 49.9 | 353 | 4.3 | 178 | 2.2 | 2,398 | 29.0 |

[a] Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 3-2

## Primary source of support for postdoctoral appointees in science, engineering, and health, by field: 2019

(Number and percent)

| Broad field | Total | Federal | | Institutional | | Nonfederal domestic | | Foreign | | Self-support | | Unknown | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All surveyed fields | 66,247 | 32,488 | 49.0 | 15,631 | 23.6 | 9,948 | 15.0 | 1,600 | 2.4 | 881 | 1.3 | 5,699 | 8.6 |
| Science | 38,503 | 19,770 | 51.3 | 8,763 | 22.8 | 5,543 | 14.4 | 853 | 2.2 | 334 | 0.9 | 3,240 | 8.4 |
| Agricultural sciences | 1,079 | 469 | 43.5 | 275 | 25.5 | 182 | 16.9 | 24 | 2.2 | 3 | 0.3 | 126 | 11.7 |
| Biological and biomedical sciences | 21,847 | 11,887 | 54.4 | 4,133 | 18.9 | 3,284 | 15.0 | 408 | 1.9 | 133 | 0.6 | 2,002 | 9.2 |
| Computer and information sciences | 878 | 399 | 45.4 | 240 | 27.3 | 130 | 14.8 | 33 | 3.8 | 10 | 1.1 | 66 | 7.5 |
| Geosciences, atmospheric sciences, and ocean sciences | 1,778 | 949 | 53.4 | 400 | 22.5 | 234 | 13.2 | 68 | 3.8 | 39 | 2.2 | 88 | 4.9 |
| Mathematics and statistics | 1,070 | 326 | 30.5 | 537 | 50.2 | 85 | 7.9 | 26 | 2.4 | 5 | 0.5 | 91 | 8.5 |
| Multidisciplinary and interdisciplinary studies | 972 | 462 | 47.5 | 325 | 33.4 | 91 | 9.4 | 10 | 1.0 | 18 | 1.9 | 66 | 6.8 |
| Natural resources and conservation | 806 | 342 | 42.4 | 270 | 33.5 | 108 | 13.4 | 14 | 1.7 | 15 | 1.9 | 57 | 7.1 |
| Physical sciences | 7,159 | 3,946 | 55.1 | 1,529 | 21.4 | 987 | 13.8 | 198 | 2.8 | 69 | 1.0 | 430 | 6.0 |
| Psychology | 1,152 | 605 | 52.5 | 280 | 24.3 | 125 | 10.9 | 28 | 2.4 | 26 | 2.3 | 88 | 7.6 |
| Social sciences | 1,762 | 385 | 21.9 | 774 | 43.9 | 317 | 18.0 | 44 | 2.5 | 16 | 0.9 | 226 | 12.8 |
| Engineering | 8,266 | 3,911 | 47.3 | 2,022 | 24.5 | 1,376 | 16.6 | 312 | 3.8 | 78 | 0.9 | 567 | 6.9 |
| Health | 19,478 | 8,807 | 45.2 | 4,846 | 24.9 | 3,029 | 15.6 | 435 | 2.2 | 469 | 2.4 | 1,892 | 9.7 |
| Clinical medicine[a] | 16,650 | 7,502 | 45.1 | 4,009 | 24.1 | 2,642 | 15.9 | 412 | 2.5 | 460 | 2.8 | 1,625 | 9.8 |
| Other health | 2,828 | 1,305 | 46.1 | 837 | 29.6 | 387 | 13.7 | 23 | 0.8 | 9 | 0.3 | 267 | 9.4 |

[a] Clinical medicine includes postdoctoral appointees in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine not elsewhere classified.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 3-3

## Detailed primary source of federal support for full-time graduate students in science, engineering, and health: 2019

(Number and percent)

| Broad field | Total | DOD | | DOE | | HHS: NIH | | HHS: Other HHS | | NASA | | NSF | | USDA | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All graduate students | 73,605 | 8,495 | 11.5 | 5,119 | 7.0 | 21,025 | 28.6 | 2,498 | 3.4 | 2,057 | 2.8 | 21,801 | 29.6 | 2,580 | 3.5 | 10,030 | 13.6 |
| Science | 46,450 | 3,392 | 7.3 | 2,534 | 5.5 | 16,486 | 35.5 | 1,491 | 3.2 | 1,250 | 2.7 | 13,222 | 28.5 | 2,168 | 4.7 | 5,907 | 12.7 |
| Agricultural sciences | 1,280 | 9 | 0.7 | 28 | 2.2 | 45 | 3.5 | 75 | 5.9 | 3 | 0.2 | 120 | 9.4 | 808 | 63.1 | 192 | 15.0 |
| Biological and biomedical sciences | 18,553 | 359 | 1.9 | 136 | 0.7 | 12,999 | 70.1 | 737 | 4.0 | 59 | 0.3 | 2,441 | 13.2 | 633 | 3.4 | 1,189 | 6.4 |
| Computer and information sciences | 5,124 | 1,097 | 21.4 | 111 | 2.2 | 308 | 6.0 | 77 | 1.5 | 35 | 0.7 | 2,776 | 54.2 | 32 | 0.6 | 688 | 13.4 |
| Geosciences, atmospheric sciences, and ocean sciences | 2,504 | 183 | 7.3 | 90 | 3.6 | 23 | 0.9 | 8 | 0.3 | 452 | 18.1 | 1,188 | 47.4 | 26 | 1.0 | 534 | 21.3 |
| Mathematics and statistics | 1,463 | 151 | 10.3 | 40 | 2.7 | 182 | 12.4 | 29 | 2.0 | 19 | 1.3 | 882 | 60.3 | 21 | 1.4 | 139 | 9.5 |
| Multidisciplinary and interdisciplinary studies | 497 | 54 | 10.9 | 26 | 5.2 | 112 | 22.5 | 11 | 2.2 | 6 | 1.2 | 159 | 32.0 | 38 | 7.6 | 91 | 18.3 |
| Natural resources and conservation | 1,215 | 31 | 2.6 | 40 | 3.3 | 23 | 1.9 | 71 | 5.8 | 36 | 3.0 | 305 | 25.1 | 332 | 27.3 | 377 | 31.0 |
| Physical sciences | 10,530 | 813 | 7.7 | 2,039 | 19.4 | 1,762 | 16.7 | 234 | 2.2 | 599 | 5.7 | 4,213 | 40.0 | 31 | 0.3 | 839 | 8.0 |
| Psychology | 2,469 | 175 | 7.1 | 9 | 0.4 | 810 | 32.8 | 175 | 7.1 | 3 | 0.1 | 432 | 17.5 | 5 | 0.2 | 860 | 34.8 |
| Social sciences | 2,815 | 520 | 18.5 | 15 | 0.5 | 222 | 7.9 | 74 | 2.6 | 38 | 1.3 | 706 | 25.1 | 242 | 8.6 | 998 | 35.5 |
| Engineering | 24,012 | 5,030 | 20.9 | 2,581 | 10.7 | 3,000 | 12.5 | 655 | 2.7 | 804 | 3.3 | 8,401 | 35.0 | 339 | 1.4 | 3,202 | 13.3 |
| Health | 3,143 | 73 | 2.3 | 4 | 0.1 | 1,539 | 49.0 | 352 | 11.2 | 3 | 0.1 | 178 | 5.7 | 73 | 2.3 | 921 | 29.3 |
| Clinical medicine[a] | 1,265 | 15 | 1.2 | 4 | 0.3 | 592 | 46.8 | 244 | 19.3 | 1 | 0.1 | 41 | 3.2 | 15 | 1.2 | 353 | 27.9 |
| Other health | 1,878 | 58 | 3.1 | 0 | 0.0 | 947 | 50.4 | 108 | 5.8 | 2 | 0.1 | 137 | 7.3 | 58 | 3.1 | 568 | 30.2 |
| Master's students | 11,491 | 2,492 | 21.7 | 452 | 3.9 | 1,046 | 9.1 | 471 | 4.1 | 276 | 2.4 | 2,054 | 17.9 | 977 | 8.5 | 3,723 | 32.4 |
| Science | 6,468 | 1,079 | 16.7 | 91 | 1.4 | 585 | 9.0 | 226 | 3.5 | 117 | 1.8 | 1,224 | 18.9 | 865 | 13.4 | 2,281 | 35.3 |
| Agricultural sciences | 537 | 4 | 0.7 | 8 | 1.5 | 8 | 1.5 | 31 | 5.8 | 0 | 0.0 | 31 | 5.8 | 359 | 66.9 | 96 | 17.9 |
| Biological and biomedical sciences | 1,263 | 64 | 5.1 | 8 | 0.6 | 399 | 31.6 | 70 | 5.5 | 6 | 0.5 | 210 | 16.6 | 197 | 15.6 | 309 | 24.5 |
| Computer and information sciences | 1,061 | 316 | 29.8 | 12 | 1.1 | 73 | 6.9 | 16 | 1.5 | 9 | 0.8 | 366 | 34.5 | 11 | 1.0 | 258 | 24.3 |
| Geosciences, atmospheric sciences, and ocean sciences | 635 | 85 | 13.4 | 19 | 3.0 | 2 | 0.3 | 1 | 0.2 | 51 | 8.0 | 236 | 37.2 | 14 | 2.2 | 227 | 35.7 |
| Mathematics and statistics | 157 | 33 | 21.0 | 6 | 3.8 | 19 | 12.1 | 2 | 1.3 | 1 | 0.6 | 52 | 33.1 | 2 | 1.3 | 42 | 26.8 |
| Multidisciplinary and interdisciplinary studies | 125 | 22 | 17.6 | 3 | 2.4 | 10 | 8.0 | 1 | 0.8 | 4 | 3.2 | 24 | 19.2 | 11 | 8.8 | 50 | 40.0 |
| Natural resources and conservation | 577 | 20 | 3.5 | 14 | 2.4 | 3 | 0.5 | 46 | 8.0 | 9 | 1.6 | 86 | 14.9 | 177 | 30.7 | 222 | 38.5 |
| Physical sciences | 307 | 31 | 10.1 | 17 | 5.5 | 24 | 7.8 | 9 | 2.9 | 27 | 8.8 | 112 | 36.5 | 3 | 1.0 | 84 | 27.4 |
| Psychology | 628 | 48 | 7.6 | 3 | 0.5 | 32 | 5.1 | 35 | 5.6 | 0 | 0.0 | 30 | 4.8 | 2 | 0.3 | 478 | 76.1 |
| Social sciences | 1,178 | 456 | 38.7 | 1 | 0.1 | 15 | 1.3 | 15 | 1.3 | 10 | 0.8 | 77 | 6.5 | 89 | 7.6 | 515 | 43.7 |
| Engineering | 3,762 | 1,389 | 36.9 | 360 | 9.6 | 145 | 3.9 | 112 | 3.0 | 159 | 4.2 | 769 | 20.4 | 90 | 2.4 | 738 | 19.6 |
| Health | 1,261 | 24 | 1.9 | 1 | 0.1 | 316 | 25.1 | 133 | 10.5 | 0 | 0.0 | 61 | 4.8 | 22 | 1.7 | 704 | 55.8 |
| Clinical medicine[a] | 590 | 7 | 1.2 | 1 | 0.2 | 205 | 34.7 | 113 | 19.2 | 0 | 0.0 | 7 | 1.2 | 7 | 1.2 | 250 | 42.4 |
| Other health | 671 | 17 | 2.5 | 0 | 0.0 | 111 | 16.5 | 20 | 3.0 | 0 | 0.0 | 54 | 8.0 | 15 | 2.2 | 454 | 67.7 |
| Doctoral students | 62,114 | 6,003 | 9.7 | 4,667 | 7.5 | 19,979 | 32.2 | 2,027 | 3.3 | 1,781 | 2.9 | 19,747 | 31.8 | 1,603 | 2.6 | 6,307 | 10.2 |
| Science | 39,982 | 2,313 | 5.8 | 2,443 | 6.1 | 15,901 | 39.8 | 1,265 | 3.2 | 1,133 | 2.8 | 11,998 | 30.0 | 1,303 | 3.3 | 3,626 | 9.1 |
| Agricultural sciences | 743 | 5 | 0.7 | 20 | 2.7 | 37 | 5.0 | 44 | 5.9 | 3 | 0.4 | 89 | 12.0 | 449 | 60.4 | 96 | 12.9 |

TABLE 3-3

## Detailed primary source of federal support for full-time graduate students in science, engineering, and health: 2019

(Number and percent)

| Broad field | Total | DOD | | DOE | | HHS: NIH | | HHS: Other HHS | | NASA | | NSF | | USDA | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Biological and biomedical sciences | 17,290 | 295 | 1.7 | 128 | 0.7 | 12,600 | 72.9 | 667 | 3.9 | 53 | 0.3 | 2,231 | 12.9 | 436 | 2.5 | 880 | 5.1 |
| Computer and information sciences | 4,063 | 781 | 19.2 | 99 | 2.4 | 235 | 5.8 | 61 | 1.5 | 26 | 0.6 | 2,410 | 59.3 | 21 | 0.5 | 430 | 10.6 |
| Geosciences, atmospheric sciences, and ocean sciences | 1,869 | 98 | 5.2 | 71 | 3.8 | 21 | 1.1 | 7 | 0.4 | 401 | 21.5 | 952 | 50.9 | 12 | 0.6 | 307 | 16.4 |
| Mathematics and statistics | 1,306 | 118 | 9.0 | 34 | 2.6 | 163 | 12.5 | 27 | 2.1 | 18 | 1.4 | 830 | 63.6 | 19 | 1.5 | 97 | 7.4 |
| Multidisciplinary and interdisciplinary studies | 372 | 32 | 8.6 | 23 | 6.2 | 102 | 27.4 | 10 | 2.7 | 2 | 0.5 | 135 | 36.3 | 27 | 7.3 | 41 | 11.0 |
| Natural resources and conservation | 638 | 11 | 1.7 | 26 | 4.1 | 20 | 3.1 | 25 | 3.9 | 27 | 4.2 | 219 | 34.3 | 155 | 24.3 | 155 | 24.3 |
| Physical sciences | 10,223 | 782 | 7.6 | 2,022 | 19.8 | 1,738 | 17.0 | 225 | 2.2 | 572 | 5.6 | 4,101 | 40.1 | 28 | 0.3 | 755 | 7.4 |
| Psychology | 1,841 | 127 | 6.9 | 6 | 0.3 | 778 | 42.3 | 140 | 7.6 | 3 | 0.2 | 402 | 21.8 | 3 | 0.2 | 382 | 20.7 |
| Social sciences | 1,637 | 64 | 3.9 | 14 | 0.9 | 207 | 12.6 | 59 | 3.6 | 28 | 1.7 | 629 | 38.4 | 153 | 9.3 | 483 | 29.5 |
| Engineering | 20,250 | 3,641 | 18.0 | 2,221 | 11.0 | 2,855 | 14.1 | 543 | 2.7 | 645 | 3.2 | 7,632 | 37.7 | 249 | 1.2 | 2,464 | 12.2 |
| Health | 1,882 | 49 | 2.6 | 3 | 0.2 | 1,223 | 65.0 | 219 | 11.6 | 3 | 0.2 | 117 | 6.2 | 51 | 2.7 | 217 | 11.5 |
| Clinical medicine[a] | 675 | 8 | 1.2 | 3 | 0.4 | 387 | 57.3 | 131 | 19.4 | 1 | 0.1 | 34 | 5.0 | 8 | 1.2 | 103 | 15.3 |
| Other health | 1,207 | 41 | 3.4 | 0 | 0.0 | 836 | 69.3 | 88 | 7.3 | 2 | 0.2 | 83 | 6.9 | 43 | 3.6 | 114 | 9.4 |

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 3-4

## Detailed primary source of federal support for postdoctoral appointees in science, engineering, and health, by field: 2019

(Number and percent)

| Broad field | Total | DOD | | DOE | | HHS: NIH | | HHS: Other HHS | | NASA | | NSF | | USDA | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All surveyed fields | 32,488 | 2,359 | 7.3 | 2,037 | 6.3 | 19,504 | 60.0 | 873 | 2.7 | 717 | 2.2 | 3,578 | 11.0 | 805 | 2.5 | 2,615 | 8.0 |
| Science | 19,770 | 1,138 | 5.8 | 1,392 | 7.0 | 10,799 | 54.6 | 559 | 2.8 | 599 | 3.0 | 2,866 | 14.5 | 716 | 3.6 | 1,701 | 8.6 |
| Agricultural sciences | 469 | 11 | 2.3 | 24 | 5.1 | 49 | 10.4 | 11 | 2.3 | 3 | 0.6 | 51 | 10.9 | 265 | 56.5 | 55 | 11.7 |
| Biological and biomedical sciences | 11,887 | 383 | 3.2 | 199 | 1.7 | 8,974 | 75.5 | 385 | 3.2 | 40 | 0.3 | 814 | 6.8 | 301 | 2.5 | 791 | 6.7 |
| Computer and information sciences | 399 | 148 | 37.1 | 17 | 4.3 | 33 | 8.3 | 3 | 0.8 | 5 | 1.3 | 147 | 36.8 | 2 | 0.5 | 44 | 11.0 |
| Geosciences, atmospheric sciences, and ocean sciences | 949 | 67 | 7.1 | 63 | 6.6 | 23 | 2.4 | 4 | 0.4 | 200 | 21.1 | 346 | 36.5 | 20 | 2.1 | 226 | 23.8 |
| Mathematics and statistics | 326 | 52 | 16.0 | 22 | 6.7 | 71 | 21.8 | 1 | 0.3 | 2 | 0.6 | 149 | 45.7 | 0 | 0.0 | 29 | 8.9 |
| Multidisciplinary and interdisciplinary studies | 462 | 53 | 11.5 | 30 | 6.5 | 238 | 51.5 | 16 | 3.5 | 8 | 1.7 | 68 | 14.7 | 14 | 3.0 | 35 | 7.6 |
| Natural resources and conservation | 342 | 8 | 2.3 | 20 | 5.8 | 8 | 2.3 | 5 | 1.5 | 17 | 5.0 | 98 | 28.7 | 76 | 22.2 | 110 | 32.2 |
| Physical sciences | 3,946 | 372 | 9.4 | 1,010 | 25.6 | 893 | 22.6 | 85 | 2.2 | 302 | 7.7 | 1,003 | 25.4 | 4 | 0.1 | 277 | 7.0 |
| Psychology | 605 | 29 | 4.8 | 3 | 0.5 | 404 | 66.8 | 25 | 4.1 | 3 | 0.5 | 80 | 13.2 | 5 | 0.8 | 56 | 9.3 |
| Social sciences | 385 | 15 | 3.9 | 4 | 1.0 | 106 | 27.5 | 24 | 6.2 | 19 | 4.9 | 110 | 28.6 | 29 | 7.5 | 78 | 20.3 |
| Engineering | 3,911 | 933 | 23.9 | 642 | 16.4 | 974 | 24.9 | 52 | 1.3 | 102 | 2.6 | 664 | 17.0 | 50 | 1.3 | 494 | 12.6 |
| Health | 8,807 | 288 | 3.3 | 3 | * | 7,731 | 87.8 | 262 | 3.0 | 16 | 0.2 | 48 | 0.5 | 39 | 0.4 | 420 | 4.8 |
| Clinical medicine[a] | 7,502 | 238 | 3.2 | 3 | * | 6,703 | 89.3 | 180 | 2.4 | 13 | 0.2 | 29 | 0.4 | 3 | * | 333 | 4.4 |
| Other health | 1,305 | 50 | 3.8 | 0 | 0.0 | 1,028 | 78.8 | 82 | 6.3 | 3 | 0.2 | 19 | 1.5 | 36 | 2.8 | 87 | 6.7 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Clinical medicine includes postdoctoral appointees in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine not elsewhere classified.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 3-5

## Primary mechanism of support for full-time graduate students in science, engineering, and health, by broad field: 2019

(Number and percent)

| Broad field | Total | Fellowships | | Research assistantships | | Teaching assistantships | | Traineeships | | Other types of support | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Self-support | | Other | |
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All graduate students | 502,442 | 45,834 | 9.1 | 115,320 | 23.0 | 88,144 | 17.5 | 12,282 | 2.4 | 199,077 | 39.6 | 41,785 | 8.3 |
| Science | 331,673 | 33,386 | 10.1 | 70,105 | 21.1 | 68,927 | 20.8 | 9,495 | 2.9 | 123,868 | 37.3 | 25,892 | 7.8 |
| Agricultural sciences | 6,749 | 366 | 5.4 | 3,850 | 57.0 | 968 | 14.3 | 35 | 0.5 | 1,163 | 17.2 | 367 | 5.4 |
| Biological and biomedical sciences | 76,233 | 10,271 | 13.5 | 23,675 | 31.1 | 10,670 | 14.0 | 6,099 | 8.0 | 19,566 | 25.7 | 5,952 | 7.8 |
| Computer and information sciences | 62,120 | 2,500 | 4.0 | 8,192 | 13.2 | 7,100 | 11.4 | 401 | 0.6 | 39,031 | 62.8 | 4,896 | 7.9 |
| Geosciences, atmospheric sciences, and ocean sciences | 9,521 | 1,122 | 11.8 | 3,661 | 38.5 | 2,579 | 27.1 | 115 | 1.2 | 1,318 | 13.8 | 726 | 7.6 |
| Mathematics and statistics | 25,681 | 1,933 | 7.5 | 2,052 | 8.0 | 9,521 | 37.1 | 209 | 0.8 | 10,567 | 41.1 | 1,399 | 5.4 |
| Multidisciplinary and interdisciplinary studies | 7,033 | 697 | 9.9 | 890 | 12.7 | 780 | 11.1 | 97 | 1.4 | 3,650 | 51.9 | 919 | 13.1 |
| Natural resources and conservation | 8,101 | 698 | 8.6 | 2,371 | 29.3 | 1,390 | 17.2 | 64 | 0.8 | 2,870 | 35.4 | 708 | 8.7 |
| Physical sciences | 38,162 | 4,356 | 11.4 | 14,426 | 37.8 | 14,342 | 37.6 | 628 | 1.6 | 2,829 | 7.4 | 1,581 | 4.1 |
| Psychology | 41,093 | 2,001 | 4.9 | 4,680 | 11.4 | 6,353 | 15.5 | 938 | 2.3 | 23,783 | 57.9 | 3,338 | 8.1 |
| Social sciences | 56,980 | 9,442 | 16.6 | 6,308 | 11.1 | 15,224 | 26.7 | 909 | 1.6 | 19,091 | 33.5 | 6,006 | 10.5 |
| Engineering | 121,117 | 10,398 | 8.6 | 39,957 | 33.0 | 15,203 | 12.6 | 1,470 | 1.2 | 43,800 | 36.2 | 10,289 | 8.5 |
| Health | 49,652 | 2,050 | 4.1 | 5,258 | 10.6 | 4,014 | 8.1 | 1,317 | 2.7 | 31,409 | 63.3 | 5,604 | 11.3 |
| Clinical medicine[a] | 18,924 | 934 | 4.9 | 1,919 | 10.1 | 1,011 | 5.3 | 644 | 3.4 | 12,279 | 64.9 | 2,137 | 11.3 |
| Other health | 30,728 | 1,116 | 3.6 | 3,339 | 10.9 | 3,003 | 9.8 | 673 | 2.2 | 19,130 | 62.3 | 3,467 | 11.3 |
| Master's students | 254,532 | 7,717 | 3.0 | 20,406 | 8.0 | 23,284 | 9.1 | 2,185 | 0.9 | 176,457 | 69.3 | 24,483 | 9.6 |
| Science | 158,704 | 5,064 | 3.2 | 12,208 | 7.7 | 16,416 | 10.3 | 1,103 | 0.7 | 109,351 | 68.9 | 14,562 | 9.2 |
| Agricultural sciences | 3,504 | 107 | 3.1 | 1,816 | 51.8 | 484 | 13.8 | 9 | 0.3 | 873 | 24.9 | 215 | 6.1 |
| Biological and biomedical sciences | 25,757 | 512 | 2.0 | 2,349 | 9.1 | 3,157 | 12.3 | 172 | 0.7 | 17,471 | 67.8 | 2,096 | 8.1 |
| Computer and information sciences | 47,535 | 791 | 1.7 | 1,764 | 3.7 | 3,250 | 6.8 | 183 | 0.4 | 37,485 | 78.9 | 4,062 | 8.5 |
| Geosciences, atmospheric sciences, and ocean sciences | 3,675 | 126 | 3.4 | 1,039 | 28.3 | 1,222 | 33.3 | 20 | 0.5 | 940 | 25.6 | 328 | 8.9 |
| Mathematics and statistics | 13,359 | 295 | 2.2 | 353 | 2.6 | 1,973 | 14.8 | 25 | 0.2 | 9,807 | 73.4 | 906 | 6.8 |
| Multidisciplinary and interdisciplinary studies | 4,669 | 347 | 7.4 | 239 | 5.1 | 277 | 5.9 | 16 | 0.3 | 3,358 | 71.9 | 432 | 9.3 |
| Natural resources and conservation | 5,176 | 281 | 5.4 | 1,189 | 23.0 | 700 | 13.5 | 41 | 0.8 | 2,485 | 48.0 | 480 | 9.3 |
| Physical sciences | 3,878 | 105 | 2.7 | 551 | 14.2 | 1,213 | 31.3 | 61 | 1.6 | 1,621 | 41.8 | 327 | 8.4 |
| Psychology | 24,547 | 106 | 0.4 | 984 | 4.0 | 1,173 | 4.8 | 298 | 1.2 | 20,107 | 81.9 | 1,879 | 7.7 |
| Social sciences | 26,604 | 2,394 | 9.0 | 1,924 | 7.2 | 2,967 | 11.2 | 278 | 1.0 | 15,204 | 57.1 | 3,837 | 14.4 |
| Engineering | 57,723 | 1,776 | 3.1 | 6,236 | 10.8 | 4,838 | 8.4 | 426 | 0.7 | 38,817 | 67.2 | 5,630 | 9.8 |
| Health | 38,105 | 877 | 2.3 | 1,962 | 5.1 | 2,030 | 5.3 | 656 | 1.7 | 28,289 | 74.2 | 4,291 | 11.3 |
| Clinical medicine[a] | 15,638 | 623 | 4.0 | 829 | 5.3 | 612 | 3.9 | 330 | 2.1 | 11,557 | 73.9 | 1,687 | 10.8 |
| Other health | 22,467 | 254 | 1.1 | 1,133 | 5.0 | 1,418 | 6.3 | 326 | 1.5 | 16,732 | 74.5 | 2,604 | 11.6 |
| Doctoral students | 247,910 | 38,117 | 15.4 | 94,914 | 38.3 | 64,860 | 26.2 | 10,097 | 4.1 | 22,620 | 9.1 | 17,302 | 7.0 |
| Science | 172,969 | 28,322 | 16.4 | 57,897 | 33.5 | 52,511 | 30.4 | 8,392 | 4.9 | 14,517 | 8.4 | 11,330 | 6.6 |

TABLE 3-5

## Primary mechanism of support for full-time graduate students in science, engineering, and health, by broad field: 2019

(Number and percent)

| Broad field | Total | Fellowships | | Research assistantships | | Teaching assistantships | | Traineeships | | Other types of support | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Self-support | | Other | |
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Agricultural sciences | 3,245 | 259 | 8.0 | 2,034 | 62.7 | 484 | 14.9 | 26 | 0.8 | 290 | 8.9 | 152 | 4.7 |
| Biological and biomedical sciences | 50,476 | 9,759 | 19.3 | 21,326 | 42.2 | 7,513 | 14.9 | 5,927 | 11.7 | 2,095 | 4.2 | 3,856 | 7.6 |
| Computer and information sciences | 14,585 | 1,709 | 11.7 | 6,428 | 44.1 | 3,850 | 26.4 | 218 | 1.5 | 1,546 | 10.6 | 834 | 5.7 |
| Geosciences, atmospheric sciences, and ocean sciences | 5,846 | 996 | 17.0 | 2,622 | 44.9 | 1,357 | 23.2 | 95 | 1.6 | 378 | 6.5 | 398 | 6.8 |
| Mathematics and statistics | 12,322 | 1,638 | 13.3 | 1,699 | 13.8 | 7,548 | 61.3 | 184 | 1.5 | 760 | 6.2 | 493 | 4.0 |
| Multidisciplinary and interdisciplinary studies | 2,364 | 350 | 14.8 | 651 | 27.5 | 503 | 21.3 | 81 | 3.4 | 292 | 12.4 | 487 | 20.6 |
| Natural resources and conservation | 2,925 | 417 | 14.3 | 1,182 | 40.4 | 690 | 23.6 | 23 | 0.8 | 385 | 13.2 | 228 | 7.8 |
| Physical sciences | 34,284 | 4,251 | 12.4 | 13,875 | 40.5 | 13,129 | 38.3 | 567 | 1.7 | 1,208 | 3.5 | 1,254 | 3.7 |
| Psychology | 16,546 | 1,895 | 11.5 | 3,696 | 22.3 | 5,180 | 31.3 | 640 | 3.9 | 3,676 | 22.2 | 1,459 | 8.8 |
| Social sciences | 30,376 | 7,048 | 23.2 | 4,384 | 14.4 | 12,257 | 40.4 | 631 | 2.1 | 3,887 | 12.8 | 2,169 | 7.1 |
| Engineering | 63,394 | 8,622 | 13.6 | 33,721 | 53.2 | 10,365 | 16.4 | 1,044 | 1.6 | 4,983 | 7.9 | 4,659 | 7.3 |
| Health | 11,547 | 1,173 | 10.2 | 3,296 | 28.5 | 1,984 | 17.2 | 661 | 5.7 | 3,120 | 27.0 | 1,313 | 11.4 |
| Clinical medicine[a] | 3,286 | 311 | 9.5 | 1,090 | 33.2 | 399 | 12.1 | 314 | 9.6 | 722 | 22.0 | 450 | 13.7 |
| Other health | 8,261 | 862 | 10.4 | 2,206 | 26.7 | 1,585 | 19.2 | 347 | 4.2 | 2,398 | 29.0 | 863 | 10.4 |

[a] Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 3-6

## Primary mechanism of support for postdoctoral appointees in science, engineering, and health, by broad field: 2019

(Number and percent)

| Broad field | Total | Fellowships | | Research grants | | Traineeships | | Other types of support: Other | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All surveyed fields | 66,247 | 7,221 | 10.9 | 40,079 | 60.5 | 3,523 | 5.3 | 15,424 | 23.3 |
| Science | 38,503 | 4,018 | 10.4 | 24,903 | 64.7 | 1,490 | 3.9 | 8,092 | 21.0 |
| Agricultural sciences | 1,079 | 41 | 3.8 | 706 | 65.4 | 27 | 2.5 | 305 | 28.3 |
| Biological and biomedical sciences | 21,847 | 1,944 | 8.9 | 14,427 | 66.0 | 1,080 | 4.9 | 4,396 | 20.1 |
| Computer and information sciences | 878 | 122 | 13.9 | 558 | 63.6 | 17 | 1.9 | 181 | 20.6 |
| Geosciences, atmospheric sciences, and ocean sciences | 1,778 | 301 | 16.9 | 1,171 | 65.9 | 15 | 0.8 | 291 | 16.4 |
| Mathematics and statistics | 1,070 | 173 | 16.2 | 435 | 40.7 | 49 | 4.6 | 413 | 38.6 |
| Multidisciplinary and interdisciplinary studies | 972 | 96 | 9.9 | 575 | 59.2 | 39 | 4.0 | 262 | 27.0 |
| Natural resources and conservation | 806 | 75 | 9.3 | 528 | 65.5 | 34 | 4.2 | 169 | 21.0 |
| Physical sciences | 7,159 | 806 | 11.3 | 4,987 | 69.7 | 96 | 1.3 | 1,270 | 17.7 |
| Psychology | 1,152 | 176 | 15.3 | 685 | 59.5 | 59 | 5.1 | 232 | 20.1 |
| Social sciences | 1,762 | 284 | 16.1 | 831 | 47.2 | 74 | 4.2 | 573 | 32.5 |
| Engineering | 8,266 | 791 | 9.6 | 5,939 | 71.8 | 95 | 1.1 | 1,441 | 17.4 |
| Health | 19,478 | 2,412 | 12.4 | 9,237 | 47.4 | 1,938 | 9.9 | 5,891 | 30.2 |
| Clinical medicine[a] | 16,650 | 2,106 | 12.6 | 7,746 | 46.5 | 1,651 | 9.9 | 5,147 | 30.9 |
| Other health | 2,828 | 306 | 10.8 | 1,491 | 52.7 | 287 | 10.1 | 744 | 26.3 |

[a] Clinical medicine includes postdoctoral appointees in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine not elsewhere classified.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-1

## Distribution of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers across science, engineering, and health fields: 2019

(Number and percent)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All detailed fields | 690,117 | 100.0 | 408,228 | 100.0 | 281,889 | 100.0 | 66,247 | 100.0 | 30,349 | 100.0 |
| Science | 453,691 | 65.7 | 259,795 | 63.6 | 193,896 | 68.8 | 38,503 | 58.1 | 18,819 | 62.0 |
| Agricultural sciences | 9,518 | 1.4 | 5,629 | 1.4 | 3,889 | 1.4 | 1,079 | 1.6 | 645 | 2.1 |
| Biological and biomedical sciences | 91,993 | 13.3 | 38,078 | 9.3 | 53,915 | 19.1 | 21,847 | 33.0 | 8,229 | 27.1 |
| Biochemistry | 5,342 | 0.8 | 808 | 0.2 | 4,534 | 1.6 | 1,912 | 2.9 | 755 | 2.5 |
| Biology | 15,801 | 2.3 | 8,635 | 2.1 | 7,166 | 2.5 | 2,203 | 3.3 | 766 | 2.5 |
| Biomedical sciences | 9,820 | 1.4 | 5,241 | 1.3 | 4,579 | 1.6 | 1,942 | 2.9 | 622 | 2.0 |
| Biophysics | 897 | 0.1 | 7 | * | 890 | 0.3 | 164 | 0.2 | 36 | 0.1 |
| Biostatistics and bioinformatics | 6,228 | 0.9 | 3,036 | 0.7 | 3,192 | 1.1 | 721 | 1.1 | 400 | 1.3 |
| Biotechnology | 3,255 | 0.5 | 3,157 | 0.8 | 98 | * | 87 | 0.1 | 91 | 0.3 |
| Botany and plant biology | 1,687 | 0.2 | 392 | 0.1 | 1,295 | 0.5 | 667 | 1.0 | 314 | 1.0 |
| Cell, cellular biology, and anatomical sciences | 5,902 | 0.9 | 927 | 0.2 | 4,975 | 1.8 | 1,785 | 2.7 | 579 | 1.9 |
| Ecology and population biology | 3,510 | 0.5 | 939 | 0.2 | 2,571 | 0.9 | 414 | 0.6 | 183 | 0.6 |
| Epidemiology | 4,692 | 0.7 | 2,776 | 0.7 | 1,916 | 0.7 | 285 | 0.4 | 99 | 0.3 |
| Genetics | 2,663 | 0.4 | 581 | 0.1 | 2,082 | 0.7 | 1,472 | 2.2 | 501 | 1.7 |
| Microbiological sciences and immunology | 5,307 | 0.8 | 1,370 | 0.3 | 3,937 | 1.4 | 1,985 | 3.0 | 764 | 2.5 |
| Molecular biology | 1,531 | 0.2 | 378 | 0.1 | 1,153 | 0.4 | 570 | 0.9 | 233 | 0.8 |
| Neurobiology and neuroscience | 5,500 | 0.8 | 362 | 0.1 | 5,138 | 1.8 | 2,216 | 3.3 | 726 | 2.4 |
| Nutrition science | 3,333 | 0.5 | 2,385 | 0.6 | 948 | 0.3 | 192 | 0.3 | 136 | 0.4 |
| Pathology and experimental pathology | 930 | 0.1 | 87 | * | 843 | 0.3 | 1,302 | 2.0 | 422 | 1.4 |
| Pharmacology and toxicology | 3,074 | 0.4 | 923 | 0.2 | 2,151 | 0.8 | 1,021 | 1.5 | 377 | 1.2 |
| Physiology | 5,297 | 0.8 | 2,594 | 0.6 | 2,703 | 1.0 | 1,640 | 2.5 | 723 | 2.4 |
| Zoology and animal biology | 2,089 | 0.3 | 891 | 0.2 | 1,198 | 0.4 | 406 | 0.6 | 168 | 0.6 |
| Biological and biomedical sciences nec | 5,135 | 0.7 | 2,589 | 0.6 | 2,546 | 0.9 | 863 | 1.3 | 334 | 1.1 |
| Computer and information sciences | 101,284 | 14.7 | 84,092 | 20.6 | 17,192 | 6.1 | 878 | 1.3 | 510 | 1.7 |
| Computer science | 33,274 | 4.8 | 24,628 | 6.0 | 8,646 | 3.1 | 487 | 0.7 | 274 | 0.9 |
| Computer and information sciences, general | 40,650 | 5.9 | 33,698 | 8.3 | 6,952 | 2.5 | 263 | 0.4 | 137 | 0.5 |
| Computer and information sciences nec | 27,360 | 4.0 | 25,766 | 6.3 | 1,594 | 0.6 | 128 | 0.2 | 99 | 0.3 |
| Geosciences, atmospheric sciences, and ocean sciences | 11,878 | 1.7 | 5,327 | 1.3 | 6,551 | 2.3 | 1,778 | 2.7 | 2,177 | 7.2 |
| Atmospheric sciences and meteorology | 1,339 | 0.2 | 473 | 0.1 | 866 | 0.3 | 249 | 0.4 | 434 | 1.4 |
| Geological and earth sciences | 7,849 | 1.1 | 3,610 | 0.9 | 4,239 | 1.5 | 845 | 1.3 | 1,104 | 3.6 |
| Ocean and marine sciences | 2,690 | 0.4 | 1,244 | 0.3 | 1,446 | 0.5 | 393 | 0.6 | 321 | 1.1 |
| Geosciences, atmospheric sciences, and ocean sciences nec | ne | ne | ne | ne | ne | ne | 291 | 0.4 | 318 | 1.0 |
| Mathematics and statistics | 33,159 | 4.8 | 19,594 | 4.8 | 13,565 | 4.8 | 1,070 | 1.6 | 305 | 1.0 |
| Mathematics and applied mathematics | 22,241 | 3.2 | 11,933 | 2.9 | 10,308 | 3.7 | 892 | 1.3 | 226 | 0.7 |
| Statistics | 10,918 | 1.6 | 7,661 | 1.9 | 3,257 | 1.2 | 178 | 0.3 | 79 | 0.3 |
| Multidisciplinary and interdisciplinary studies | 11,181 | 1.6 | 8,203 | 2.0 | 2,978 | 1.1 | 972 | 1.5 | 820 | 2.7 |
| Natural resources and conservation | 11,743 | 1.7 | 8,066 | 2.0 | 3,677 | 1.3 | 806 | 1.2 | 582 | 1.9 |
| Environmental science and studies | 5,621 | 0.8 | 3,883 | 1.0 | 1,738 | 0.6 | 277 | 0.4 | 215 | 0.7 |

TABLE 4-1

## Distribution of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers across science, engineering, and health fields: 2019

(Number and percent)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Forestry, natural resources, and conservation | 6,122 | 0.9 | 4,183 | 1.0 | 1,939 | 0.7 | 529 | 0.8 | 367 | 1.2 |
| Physical sciences | 42,867 | 6.2 | 6,361 | 1.6 | 36,506 | 13.0 | 7,159 | 10.8 | 3,316 | 10.9 |
| Astronomy and astrophysics | 1,450 | 0.2 | 77 | * | 1,373 | 0.5 | 571 | 0.9 | 602 | 2.0 |
| Chemistry | 22,900 | 3.3 | 3,152 | 0.8 | 19,748 | 7.0 | 3,383 | 5.1 | 983 | 3.2 |
| Materials sciences | 1,552 | 0.2 | 539 | 0.1 | 1,013 | 0.4 | 259 | 0.4 | 64 | 0.2 |
| Physics | 16,115 | 2.3 | 2,164 | 0.5 | 13,951 | 4.9 | 2,721 | 4.1 | 1,458 | 4.8 |
| Physical sciences nec | 850 | 0.1 | 429 | 0.1 | 421 | 0.1 | 225 | 0.3 | 209 | 0.7 |
| Psychology | 61,069 | 8.8 | 40,838 | 10.0 | 20,231 | 7.2 | 1,152 | 1.7 | 576 | 1.9 |
| Clinical psychology | 7,372 | 1.1 | 3,587 | 0.9 | 3,785 | 1.3 | 72 | 0.1 | 11 | * |
| Counseling and applied psychology | 35,859 | 5.2 | 29,322 | 7.2 | 6,537 | 2.3 | 167 | 0.3 | 120 | 0.4 |
| Psychology, general | 13,106 | 1.9 | 6,357 | 1.6 | 6,749 | 2.4 | 663 | 1.0 | 328 | 1.1 |
| Research and experimental psychology | 4,732 | 0.7 | 1,572 | 0.4 | 3,160 | 1.1 | 250 | 0.4 | 117 | 0.4 |
| Social sciences | 78,999 | 11.4 | 43,607 | 10.7 | 35,392 | 12.6 | 1,762 | 2.7 | 1,659 | 5.5 |
| Agricultural economics | 1,506 | 0.2 | 700 | 0.2 | 806 | 0.3 | 52 | 0.1 | 51 | 0.2 |
| Anthropology | 6,598 | 1.0 | 2,233 | 0.5 | 4,365 | 1.5 | 148 | 0.2 | 99 | 0.3 |
| Criminal justice and safety studies | 5,817 | 0.8 | 4,917 | 1.2 | 900 | 0.3 | 16 | * | 13 | * |
| Economics (except agricultural) | 14,129 | 2.0 | 6,084 | 1.5 | 8,045 | 2.9 | 132 | 0.2 | 155 | 0.5 |
| Geography and cartography | 4,401 | 0.6 | 2,660 | 0.7 | 1,741 | 0.6 | 128 | 0.2 | 110 | 0.4 |
| History and philosophy of science | 289 | * | 32 | * | 257 | 0.1 | 21 | * | 3 | * |
| Human development | 2,070 | 0.3 | 1,339 | 0.3 | 731 | 0.3 | 156 | 0.2 | 164 | 0.5 |
| International relations and national security studies | 7,070 | 1.0 | 6,657 | 1.6 | 413 | 0.1 | 85 | 0.1 | 50 | 0.2 |
| Linguistics | 2,769 | 0.4 | 1,153 | 0.3 | 1,616 | 0.6 | 39 | 0.1 | 29 | 0.1 |
| Political science and government | 8,385 | 1.2 | 2,897 | 0.7 | 5,488 | 1.9 | 170 | 0.3 | 83 | 0.3 |
| Public policy analysis | 8,711 | 1.3 | 6,297 | 1.5 | 2,414 | 0.9 | 220 | 0.3 | 337 | 1.1 |
| Sociology | 7,333 | 1.1 | 2,263 | 0.6 | 5,070 | 1.8 | 159 | 0.2 | 164 | 0.5 |
| Social sciences nec | 9,921 | 1.4 | 6,375 | 1.6 | 3,546 | 1.3 | 436 | 0.7 | 401 | 1.3 |
| Engineering | 164,004 | 23.8 | 91,939 | 22.5 | 72,065 | 25.6 | 8,266 | 12.5 | 3,909 | 12.9 |
| Aerospace, aeronautical, and astronautical engineering | 6,255 | 0.9 | 3,701 | 0.9 | 2,554 | 0.9 | 227 | 0.3 | 124 | 0.4 |
| Agricultural engineering | 1,156 | 0.2 | 494 | 0.1 | 662 | 0.2 | 112 | 0.2 | 55 | 0.2 |
| Bioengineering and biomedical engineering | 12,050 | 1.7 | 4,335 | 1.1 | 7,715 | 2.7 | 1,515 | 2.3 | 492 | 1.6 |
| Biological and biosystems engineering | 308 | * | 89 | * | 219 | 0.1 | 87 | 0.1 | 53 | 0.2 |
| Chemical engineering | 9,689 | 1.4 | 2,632 | 0.6 | 7,057 | 2.5 | 1,157 | 1.7 | 328 | 1.1 |
| Civil engineering | 19,625 | 2.8 | 11,873 | 2.9 | 7,752 | 2.8 | 865 | 1.3 | 492 | 1.6 |
| Electrical, electronics, and communications engineering | 46,754 | 6.8 | 28,177 | 6.9 | 18,577 | 6.6 | 1,305 | 2.0 | 637 | 2.1 |
| Engineering mechanics, physics, and science | 2,299 | 0.3 | 852 | 0.2 | 1,447 | 0.5 | 180 | 0.3 | 186 | 0.6 |
| Industrial and manufacturing engineering | 15,674 | 2.3 | 11,912 | 2.9 | 3,762 | 1.3 | 167 | 0.3 | 137 | 0.5 |
| Mechanical engineering | 26,108 | 3.8 | 14,861 | 3.6 | 11,247 | 4.0 | 1,142 | 1.7 | 531 | 1.7 |
| Metallurgical and materials engineering | 6,590 | 1.0 | 1,974 | 0.5 | 4,616 | 1.6 | 642 | 1.0 | 242 | 0.8 |
| Mining engineering | 493 | 0.1 | 292 | 0.1 | 201 | 0.1 | 23 | * | 61 | 0.2 |
| Nanotechnology | 195 | * | 49 | * | 146 | 0.1 | 151 | 0.2 | 76 | 0.3 |
| Nuclear engineering | 1,449 | 0.2 | 418 | 0.1 | 1,031 | 0.4 | 80 | 0.1 | 41 | 0.1 |

TABLE 4-1

## Distribution of graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers across science, engineering, and health fields: 2019

(Number and percent)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Petroleum engineering | 1,249 | 0.2 | 642 | 0.2 | 607 | 0.2 | 72 | 0.1 | 82 | 0.3 |
| Engineering nec | 14,110 | 2.0 | 9,638 | 2.4 | 4,472 | 1.6 | 541 | 0.8 | 372 | 1.2 |
| Health | 72,422 | 10.5 | 56,494 | 13.8 | 15,928 | 5.7 | 19,478 | 29.4 | 7,621 | 25.1 |
| Clinical medicine[a] | 30,822 | 4.5 | 26,251 | 6.4 | 4,571 | 1.6 | 16,650 | 25.1 | 6,273 | 20.7 |
| Anesthesiology | ne | ne | ne | ne | ne | ne | 494 | 0.7 | 155 | 0.5 |
| Cardiology | ne | ne | ne | ne | ne | ne | 788 | 1.2 | 200 | 0.7 |
| Endocrinology | ne | ne | ne | ne | ne | ne | 345 | 0.5 | 107 | 0.4 |
| Gastroenterology | ne | ne | ne | ne | ne | ne | 287 | 0.4 | 98 | 0.3 |
| Hematology | ne | ne | ne | ne | ne | ne | 434 | 0.7 | 160 | 0.5 |
| Neurology | ne | ne | ne | ne | ne | ne | 1,466 | 2.2 | 496 | 1.6 |
| Obstetrics and gynecology | ne | ne | ne | ne | ne | ne | 312 | 0.5 | 104 | 0.3 |
| Oncology and cancer research | ne | ne | ne | ne | ne | ne | 1,830 | 2.8 | 630 | 2.1 |
| Ophthalmology | ne | ne | ne | ne | ne | ne | 523 | 0.8 | 261 | 0.9 |
| Otorhinolaryngology | ne | ne | ne | ne | ne | ne | 275 | 0.4 | 121 | 0.4 |
| Pediatrics | ne | ne | ne | ne | ne | ne | 1,264 | 1.9 | 597 | 2.0 |
| Psychiatry | ne | ne | ne | ne | ne | ne | 1,004 | 1.5 | 241 | 0.8 |
| Public health | 29,594 | 4.3 | 25,403 | 6.2 | 4,191 | 1.5 | 843 | 1.3 | 687 | 2.3 |
| Pulmonary disease | ne | ne | ne | ne | ne | ne | 275 | 0.4 | 107 | 0.4 |
| Radiological sciences | ne | ne | ne | ne | ne | ne | 1,152 | 1.7 | 391 | 1.3 |
| Surgery | ne | ne | ne | ne | ne | ne | 1,376 | 2.1 | 527 | 1.7 |
| Clinical medicine nec | 1,228 | 0.2 | 848 | 0.2 | 380 | 0.1 | 3,982 | 6.0 | 1,391 | 4.6 |
| Other health | 41,600 | 6.0 | 30,243 | 7.4 | 11,357 | 4.0 | 2,828 | 4.3 | 1,348 | 4.4 |
| Communication disorders sciences | 17,257 | 2.5 | 16,346 | 4.0 | 911 | 0.3 | 75 | 0.1 | 46 | 0.2 |
| Dental sciences | 1,523 | 0.2 | 1,315 | 0.3 | 208 | 0.1 | 316 | 0.5 | 110 | 0.4 |
| Nursing science | 5,300 | 0.8 | 1,861 | 0.5 | 3,439 | 1.2 | 120 | 0.2 | 97 | 0.3 |
| Pharmaceutical sciences | 4,308 | 0.6 | 1,187 | 0.3 | 3,121 | 1.1 | 1,091 | 1.6 | 392 | 1.3 |
| Veterinary biomedical and clinical sciences | 1,573 | 0.2 | 881 | 0.2 | 692 | 0.2 | 679 | 1.0 | 290 | 1.0 |
| Other health nec | 11,639 | 1.7 | 8,653 | 2.1 | 2,986 | 1.1 | 547 | 0.8 | 413 | 1.4 |

* = value < 0.05%; ne = not eligible.

nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec. Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-2

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field and sex: 2019

(Number and percent)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| All detailed fields | 690,117 | 47.1 | 408,228 | 49.6 | 281,889 | 43.5 | 66,247 | 40.9 | 30,349 | 40.8 |
| Science | 453,691 | 50.0 | 259,795 | 51.7 | 193,896 | 47.7 | 38,503 | 40.1 | 18,819 | 40.2 |
| Agricultural sciences | 9,518 | 55.5 | 5,629 | 57.8 | 3,889 | 52.2 | 1,079 | 42.4 | 645 | 43.9 |
| Biological and biomedical sciences | 91,993 | 58.8 | 38,078 | 63.8 | 53,915 | 55.4 | 21,847 | 44.5 | 8,229 | 47.4 |
| Biochemistry | 5,342 | 51.4 | 808 | 57.7 | 4,534 | 50.2 | 1,912 | 39.3 | 755 | 42.9 |
| Biology | 15,801 | 58.9 | 8,635 | 62.3 | 7,166 | 54.9 | 2,203 | 43.4 | 766 | 45.8 |
| Biomedical sciences | 9,820 | 59.8 | 5,241 | 60.7 | 4,579 | 58.7 | 1,942 | 47.8 | 622 | 47.1 |
| Biophysics | 897 | 36.8 | 7 | 42.9 | 890 | 36.7 | 164 | 34.1 | 36 | 25.0 |
| Biostatistics and bioinformatics | 6,228 | 50.9 | 3,036 | 57.1 | 3,192 | 45.0 | 721 | 38.6 | 400 | 48.0 |
| Biotechnology | 3,255 | 62.0 | 3,157 | 61.8 | 98 | 67.3 | 87 | 33.3 | 91 | 46.2 |
| Botany and plant biology | 1,687 | 51.5 | 392 | 54.3 | 1,295 | 50.7 | 667 | 41.5 | 314 | 43.3 |
| Cell, cellular biology, and anatomical sciences | 5,902 | 56.1 | 927 | 59.4 | 4,975 | 55.4 | 1,785 | 43.6 | 579 | 46.8 |
| Ecology and population biology | 3,510 | 58.5 | 939 | 63.4 | 2,571 | 56.8 | 414 | 44.4 | 183 | 44.3 |
| Epidemiology | 4,692 | 70.6 | 2,776 | 70.5 | 1,916 | 70.7 | 285 | 60.4 | 99 | 59.6 |
| Genetics | 2,663 | 62.4 | 581 | 80.9 | 2,082 | 57.2 | 1,472 | 44.2 | 501 | 43.9 |
| Microbiological sciences and immunology | 5,307 | 59.3 | 1,370 | 66.8 | 3,937 | 56.7 | 1,985 | 49.0 | 764 | 51.3 |
| Molecular biology | 1,531 | 55.7 | 378 | 61.6 | 1,153 | 53.8 | 570 | 40.7 | 233 | 36.9 |
| Neurobiology and neuroscience | 5,500 | 55.9 | 362 | 65.2 | 5,138 | 55.3 | 2,216 | 45.0 | 726 | 49.4 |
| Nutrition science | 3,333 | 84.9 | 2,385 | 87.7 | 948 | 77.7 | 192 | 60.4 | 136 | 58.8 |
| Pathology and experimental pathology | 930 | 60.1 | 87 | 79.3 | 843 | 58.1 | 1,302 | 43.2 | 422 | 56.6 |
| Pharmacology and toxicology | 3,074 | 60.1 | 923 | 67.1 | 2,151 | 57.0 | 1,021 | 44.2 | 377 | 46.9 |
| Physiology | 5,297 | 55.4 | 2,594 | 57.7 | 2,703 | 53.2 | 1,640 | 46.8 | 723 | 49.5 |
| Zoology and animal biology | 2,089 | 55.3 | 891 | 59.0 | 1,198 | 52.6 | 406 | 44.3 | 168 | 42.9 |
| Biological and biomedical sciences nec | 5,135 | 60.0 | 2,589 | 61.3 | 2,546 | 58.6 | 863 | 44.6 | 334 | 47.9 |
| Computer and information sciences | 101,284 | 31.1 | 84,092 | 32.1 | 17,192 | 26.3 | 878 | 21.4 | 510 | 23.9 |
| Computer science | 33,274 | 27.1 | 24,628 | 28.3 | 8,646 | 23.7 | 487 | 18.9 | 274 | 20.8 |
| Computer and information sciences, general | 40,650 | 29.5 | 33,698 | 30.3 | 6,952 | 25.7 | 263 | 21.7 | 137 | 27.7 |
| Computer and information sciences nec | 27,360 | 38.2 | 25,766 | 37.9 | 1,594 | 42.7 | 128 | 30.5 | 99 | 27.3 |
| Geosciences, atmospheric sciences, and ocean sciences | 11,878 | 47.5 | 5,327 | 48.4 | 6,551 | 46.8 | 1,778 | 38.2 | 2,177 | 31.0 |
| Atmospheric sciences and meteorology | 1,339 | 39.8 | 473 | 41.9 | 866 | 38.7 | 249 | 35.3 | 434 | 27.4 |
| Geological and earth sciences | 7,849 | 44.4 | 3,610 | 43.7 | 4,239 | 45.0 | 845 | 35.6 | 1,104 | 30.3 |
| Ocean and marine sciences | 2,690 | 60.4 | 1,244 | 64.5 | 1,446 | 56.8 | 393 | 46.1 | 321 | 42.7 |

TABLE 4-2

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field and sex: 2019

(Number and percent)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| Geosciences, atmospheric sciences, and ocean sciences nec | ne | ne | ne | ne | ne | ne | 291 | 37.5 | 318 | 26.7 |
| Mathematics and statistics | 33,159 | 37.4 | 19,594 | 43.1 | 13,565 | 29.1 | 1,070 | 25.3 | 305 | 29.8 |
| Mathematics and applied mathematics | 22,241 | 34.6 | 11,933 | 41.3 | 10,308 | 26.9 | 892 | 24.0 | 226 | 27.4 |
| Statistics | 10,918 | 43.1 | 7,661 | 46.0 | 3,257 | 36.2 | 178 | 32.0 | 79 | 36.7 |
| Multidisciplinary and interdisciplinary studies | 11,181 | 53.0 | 8,203 | 53.6 | 2,978 | 51.3 | 972 | 43.9 | 820 | 35.0 |
| Natural resources and conservation | 11,743 | 56.9 | 8,066 | 57.9 | 3,677 | 54.7 | 806 | 46.9 | 582 | 38.3 |
| Environmental science and studies | 5,621 | 60.3 | 3,883 | 61.0 | 1,738 | 58.6 | 277 | 50.9 | 215 | 47.0 |
| Forestry, natural resources, and conservation | 6,122 | 53.9 | 4,183 | 55.1 | 1,939 | 51.2 | 529 | 44.8 | 367 | 33.2 |
| Physical sciences | 42,867 | 34.6 | 6,361 | 38.5 | 36,506 | 34.0 | 7,159 | 23.7 | 3,316 | 20.3 |
| Astronomy and astrophysics | 1,450 | 40.7 | 77 | 33.8 | 1,373 | 41.1 | 571 | 28.9 | 602 | 21.3 |
| Chemistry | 22,900 | 43.3 | 3,152 | 48.1 | 19,748 | 42.5 | 3,383 | 26.2 | 983 | 25.8 |
| Materials sciences | 1,552 | 31.4 | 539 | 31.5 | 1,013 | 31.3 | 259 | 25.5 | 64 | 18.8 |
| Physics | 16,115 | 21.2 | 2,164 | 21.6 | 13,951 | 21.2 | 2,721 | 19.3 | 1,458 | 15.4 |
| Physical sciences nec | 850 | 51.6 | 429 | 62.2 | 421 | 40.9 | 225 | 24.0 | 209 | 25.4 |
| Psychology | 61,069 | 77.9 | 40,838 | 80.3 | 20,231 | 73.0 | 1,152 | 58.9 | 576 | 61.1 |
| Clinical psychology | 7,372 | 79.4 | 3,587 | 80.8 | 3,785 | 78.0 | 72 | 75.0 | 11 | 63.6 |
| Counseling and applied psychology | 35,859 | 80.2 | 29,322 | 81.3 | 6,537 | 74.9 | 167 | 68.3 | 120 | 63.3 |
| Psychology, general | 13,106 | 73.1 | 6,357 | 75.5 | 6,749 | 70.8 | 663 | 57.9 | 328 | 60.1 |
| Research and experimental psychology | 4,732 | 71.3 | 1,572 | 78.8 | 3,160 | 67.6 | 250 | 50.4 | 117 | 61.5 |
| Social sciences | 78,999 | 54.2 | 43,607 | 56.1 | 35,392 | 52.0 | 1,762 | 52.8 | 1,659 | 57.9 |
| Agricultural economics | 1,506 | 47.5 | 700 | 47.9 | 806 | 47.1 | 52 | 50.0 | 51 | 47.1 |
| Anthropology | 6,598 | 66.7 | 2,233 | 69.6 | 4,365 | 65.2 | 148 | 60.1 | 99 | 54.5 |
| Criminal justice and safety studies | 5,817 | 60.4 | 4,917 | 61.1 | 900 | 56.3 | 16 | 50.0 | 13 | 69.2 |
| Economics (except agricultural) | 14,129 | 37.8 | 6,084 | 42.6 | 8,045 | 34.2 | 132 | 31.8 | 155 | 40.6 |
| Geography and cartography | 4,401 | 47.3 | 2,660 | 43.8 | 1,741 | 52.6 | 128 | 39.1 | 110 | 40.9 |
| History and philosophy of science | 289 | 52.2 | 32 | 68.8 | 257 | 50.2 | 21 | 38.1 | 3 | 33.3 |
| Human development | 2,070 | 86.8 | 1,339 | 88.9 | 731 | 82.9 | 156 | 78.8 | 164 | 82.9 |
| International relations and national security studies | 7,070 | 48.3 | 6,657 | 48.6 | 413 | 43.3 | 85 | 34.1 | 50 | 42.0 |
| Linguistics | 2,769 | 59.2 | 1,153 | 64.6 | 1,616 | 55.4 | 39 | 41.0 | 29 | 65.5 |
| Political science and government | 8,385 | 43.7 | 2,897 | 43.7 | 5,488 | 43.7 | 170 | 42.4 | 83 | 56.6 |
| Public policy analysis | 8,711 | 57.2 | 6,297 | 58.3 | 2,414 | 54.3 | 220 | 63.6 | 337 | 57.0 |
| Sociology | 7,333 | 65.0 | 2,263 | 69.6 | 5,070 | 63.0 | 159 | 58.5 | 164 | 64.0 |
| Social sciences nec | 9,921 | 64.3 | 6,375 | 64.2 | 3,546 | 64.5 | 436 | 53.9 | 401 | 60.8 |

TABLE 4-2

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field and sex: 2019

(Number and percent)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| Engineering | 164,004 | 26.3 | 91,939 | 26.0 | 72,065 | 26.8 | 8,266 | 24.0 | 3,909 | 23.5 |
| Aerospace, aeronautical, and astronautical engineering | 6,255 | 16.9 | 3,701 | 17.0 | 2,554 | 16.6 | 227 | 13.2 | 124 | 12.9 |
| Agricultural engineering | 1,156 | 40.5 | 494 | 42.5 | 662 | 39.0 | 112 | 33.9 | 55 | 32.7 |
| Bioengineering and biomedical engineering | 12,050 | 44.2 | 4,335 | 46.6 | 7,715 | 42.9 | 1,515 | 34.7 | 492 | 38.6 |
| Biological and biosystems engineering | 308 | 38.0 | 89 | 36.0 | 219 | 38.8 | 87 | 29.9 | 53 | 30.2 |
| Chemical engineering | 9,689 | 32.6 | 2,632 | 32.7 | 7,057 | 32.5 | 1,157 | 26.2 | 328 | 26.5 |
| Civil engineering | 19,625 | 33.4 | 11,873 | 33.7 | 7,752 | 33.0 | 865 | 29.0 | 492 | 25.6 |
| Electrical, electronics, and communications engineering | 46,754 | 22.1 | 28,177 | 23.9 | 18,577 | 19.3 | 1,305 | 16.0 | 637 | 14.9 |
| Engineering mechanics, physics, and science | 2,299 | 27.4 | 852 | 27.9 | 1,447 | 27.2 | 180 | 18.3 | 186 | 21.5 |
| Industrial and manufacturing engineering | 15,674 | 28.9 | 11,912 | 28.5 | 3,762 | 30.4 | 167 | 24.6 | 137 | 23.4 |
| Mechanical engineering | 26,108 | 17.3 | 14,861 | 15.8 | 11,247 | 19.2 | 1,142 | 17.6 | 531 | 15.4 |
| Metallurgical and materials engineering | 6,590 | 31.3 | 1,974 | 30.3 | 4,616 | 31.7 | 642 | 20.1 | 242 | 21.1 |
| Mining engineering | 493 | 26.2 | 292 | 27.1 | 201 | 24.9 | 23 | 34.8 | 61 | 32.8 |
| Nanotechnology | 195 | 27.7 | 49 | 26.5 | 146 | 28.1 | 151 | 23.8 | 76 | 23.7 |
| Nuclear engineering | 1,449 | 17.7 | 418 | 17.0 | 1,031 | 17.9 | 80 | 11.3 | 41 | 24.4 |
| Petroleum engineering | 1,249 | 17.5 | 642 | 18.2 | 607 | 16.8 | 72 | 12.5 | 82 | 30.5 |
| Engineering nec | 14,110 | 26.9 | 9,638 | 26.2 | 4,472 | 28.4 | 541 | 25.0 | 372 | 25.0 |
| Health | 72,422 | 76.2 | 56,494 | 78.5 | 15,928 | 68.0 | 19,478 | 49.6 | 7,621 | 51.0 |
| Clinical medicine[a] | 30,822 | 75.1 | 26,251 | 76.0 | 4,571 | 70.0 | 16,650 | 49.0 | 6,273 | 50.2 |
| Anesthesiology | ne | ne | ne | ne | ne | ne | 494 | 45.3 | 155 | 46.5 |
| Cardiology | ne | ne | ne | ne | ne | ne | 788 | 40.1 | 200 | 45.0 |
| Endocrinology | ne | ne | ne | ne | ne | ne | 345 | 47.2 | 107 | 55.1 |
| Gastroenterology | ne | ne | ne | ne | ne | ne | 287 | 48.4 | 98 | 46.9 |
| Hematology | ne | ne | ne | ne | ne | ne | 434 | 47.0 | 160 | 48.8 |
| Neurology | ne | ne | ne | ne | ne | ne | 1,466 | 49.3 | 496 | 53.8 |
| Obstetrics and gynecology | ne | ne | ne | ne | ne | ne | 312 | 63.8 | 104 | 64.4 |
| Oncology and cancer research | ne | ne | ne | ne | ne | ne | 1,830 | 46.2 | 630 | 41.4 |
| Ophthalmology | ne | ne | ne | ne | ne | ne | 523 | 48.4 | 261 | 43.3 |
| Otorhinolaryngology | ne | ne | ne | ne | ne | ne | 275 | 49.5 | 121 | 54.5 |
| Pediatrics | ne | ne | ne | ne | ne | ne | 1,264 | 60.3 | 597 | 52.9 |
| Psychiatry | ne | ne | ne | ne | ne | ne | 1,004 | 63.1 | 241 | 62.7 |
| Public health | 29,594 | 75.7 | 25,403 | 76.5 | 4,191 | 70.8 | 843 | 62.0 | 687 | 64.0 |
| Pulmonary disease | ne | ne | ne | ne | ne | ne | 275 | 45.5 | 107 | 46.7 |
| Radiological sciences | ne | ne | ne | ne | ne | ne | 1,152 | 37.3 | 391 | 35.0 |
| Surgery | ne | ne | ne | ne | ne | ne | 1,376 | 40.6 | 527 | 38.5 |
| Clinical medicine nec | 1,228 | 61.3 | 848 | 61.3 | 380 | 61.3 | 3,982 | 48.3 | 1,391 | 52.5 |
| Other health | 41,600 | 76.9 | 30,243 | 80.6 | 11,357 | 67.1 | 2,828 | 53.0 | 1,348 | 54.7 |
| Communication disorders sciences | 17,257 | 95.0 | 16,346 | 95.8 | 911 | 80.4 | 75 | 72.0 | 46 | 67.4 |

TABLE 4-2

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field and sex: 2019

(Number and percent)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female | Total number | Percent female |
| Dental sciences | 1,523 | 51.9 | 1,315 | 50.8 | 208 | 58.7 | 316 | 53.5 | 110 | 45.5 |
| Nursing science | 5,300 | 86.8 | 1,861 | 86.9 | 3,439 | 86.7 | 120 | 87.5 | 97 | 83.5 |
| Pharmaceutical sciences | 4,308 | 54.9 | 1,187 | 61.8 | 3,121 | 52.3 | 1,091 | 41.0 | 392 | 40.3 |
| Veterinary biomedical and clinical sciences | 1,573 | 69.8 | 881 | 73.1 | 692 | 65.6 | 679 | 60.5 | 290 | 59.3 |
| Other health nec | 11,639 | 58.0 | 8,653 | 58.4 | 2,986 | 57.0 | 547 | 57.0 | 413 | 59.6 |

ne = not eligible;

nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec. Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-3

## Master's and doctoral students within science, engineering and health fields, by enrollment intensity: 2019

(Number and percent)

| Detailed field | All graduate students | | | | | | | | Master's students | | | | | | | | Doctoral students | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Full time | | | | Part time | | Total | | Full time | | | | Part time | | Total | | Full time | | | | Part time | |
| | | | All full time | | First time, full time | | | | | | All full time | | First time, full time | | | | | | All full time | | First time, full time | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All detailed fields | 690,117 | 100.0 | 502,442 | 100.0 | 163,032 | 100.0 | 187,675 | 100.0 | 408,228 | 100.0 | 254,532 | 100.0 | 116,507 | 100.0 | 153,696 | 100.0 | 281,889 | 100.0 | 247,910 | 100.0 | 46,525 | 100.0 | 33,979 | 100.0 |
| Science | 453,691 | 65.7 | 331,673 | 66.0 | 105,525 | 64.7 | 122,018 | 65.0 | 259,795 | 63.6 | 158,704 | 62.4 | 72,625 | 62.3 | 101,091 | 65.8 | 193,896 | 68.8 | 172,969 | 69.8 | 32,900 | 70.7 | 20,927 | 61.6 |
| Agricultural sciences | 9,518 | 1.4 | 6,749 | 1.3 | 1,699 | 1.0 | 2,769 | 1.5 | 5,629 | 1.4 | 3,504 | 1.4 | 1,230 | 1.1 | 2,125 | 1.4 | 3,889 | 1.4 | 3,245 | 1.3 | 469 | 1.0 | 644 | 1.9 |
| Biological and biomedical sciences | 91,993 | 13.3 | 76,233 | 15.2 | 23,071 | 14.2 | 15,760 | 8.4 | 38,078 | 9.3 | 25,757 | 10.1 | 13,522 | 11.6 | 12,321 | 8.0 | 53,915 | 19.1 | 50,476 | 20.4 | 9,549 | 20.5 | 3,439 | 10.1 |
| Biochemistry | 5,342 | 0.8 | 4,797 | 1.0 | 1,061 | 0.7 | 545 | 0.3 | 808 | 0.2 | 554 | 0.2 | 310 | 0.3 | 254 | 0.2 | 4,534 | 1.6 | 4,243 | 1.7 | 751 | 1.6 | 291 | 0.9 |
| Biology | 15,801 | 2.3 | 11,264 | 2.2 | 3,143 | 1.9 | 4,537 | 2.4 | 8,635 | 2.1 | 4,723 | 1.9 | 1,995 | 1.7 | 3,912 | 2.5 | 7,166 | 2.5 | 6,541 | 2.6 | 1,148 | 2.5 | 625 | 1.8 |
| Biomedical sciences | 9,820 | 1.4 | 8,876 | 1.8 | 4,385 | 2.7 | 944 | 0.5 | 5,241 | 1.3 | 4,559 | 1.8 | 3,187 | 2.7 | 682 | 0.4 | 4,579 | 1.6 | 4,317 | 1.7 | 1,198 | 2.6 | 262 | 0.8 |
| Biophysics | 897 | 0.1 | 881 | 0.2 | 159 | 0.1 | 16 | * | 7 | * | 3 | * | 0 | 0.0 | 4 | * | 890 | 0.3 | 878 | 0.4 | 159 | 0.3 | 12 | * |
| Biostatistics and bioinformatics | 6,228 | 0.9 | 5,200 | 1.0 | 1,780 | 1.1 | 1,028 | 0.5 | 3,036 | 0.7 | 2,281 | 0.9 | 1,193 | 1.0 | 755 | 0.5 | 3,192 | 1.1 | 2,919 | 1.2 | 587 | 1.3 | 273 | 0.8 |
| Biotechnology | 3,255 | 0.5 | 1,421 | 0.3 | 684 | 0.4 | 1,834 | 1.0 | 3,157 | 0.8 | 1,332 | 0.5 | 673 | 0.6 | 1,825 | 1.2 | 98 | * | 89 | * | 11 | * | 9 | * |
| Botany and plant biology | 1,687 | 0.2 | 1,545 | 0.3 | 301 | 0.2 | 142 | 0.1 | 392 | 0.1 | 320 | 0.1 | 113 | 0.1 | 72 | * | 1,295 | 0.5 | 1,225 | 0.5 | 188 | 0.4 | 70 | 0.2 |
| Cell, cellular biology, and anatomical sciences | 5,902 | 0.9 | 5,577 | 1.1 | 1,294 | 0.8 | 325 | 0.2 | 927 | 0.2 | 755 | 0.3 | 434 | 0.4 | 172 | 0.1 | 4,975 | 1.8 | 4,822 | 1.9 | 860 | 1.8 | 153 | 0.5 |
| Ecology and population biology | 3,510 | 0.5 | 2,911 | 0.6 | 629 | 0.4 | 599 | 0.3 | 939 | 0.2 | 637 | 0.3 | 228 | 0.2 | 302 | 0.2 | 2,571 | 0.9 | 2,274 | 0.9 | 401 | 0.9 | 297 | 0.9 |
| Epidemiology | 4,692 | 0.7 | 3,754 | 0.7 | 1,315 | 0.8 | 938 | 0.5 | 2,776 | 0.7 | 2,135 | 0.8 | 971 | 0.8 | 641 | 0.4 | 1,916 | 0.7 | 1,619 | 0.7 | 344 | 0.7 | 297 | 0.9 |
| Genetics | 2,663 | 0.4 | 2,507 | 0.5 | 531 | 0.3 | 156 | 0.1 | 581 | 0.1 | 494 | 0.2 | 230 | 0.2 | 87 | 0.1 | 2,082 | 0.7 | 2,013 | 0.8 | 301 | 0.6 | 69 | 0.2 |
| Microbiological sciences and immunology | 5,307 | 0.8 | 4,484 | 0.9 | 918 | 0.6 | 823 | 0.4 | 1,370 | 0.3 | 709 | 0.3 | 351 | 0.3 | 661 | 0.4 | 3,937 | 1.4 | 3,775 | 1.5 | 567 | 1.2 | 162 | 0.5 |
| Molecular biology | 1,531 | 0.2 | 1,304 | 0.3 | 317 | 0.2 | 227 | 0.1 | 378 | 0.1 | 232 | 0.1 | 119 | 0.1 | 146 | 0.1 | 1,153 | 0.4 | 1,072 | 0.4 | 198 | 0.4 | 81 | 0.2 |
| Neurobiology and neuroscience | 5,500 | 0.8 | 5,290 | 1.1 | 1,058 | 0.6 | 210 | 0.1 | 362 | 0.1 | 280 | 0.1 | 165 | 0.1 | 82 | 0.1 | 5,138 | 1.8 | 5,010 | 2.0 | 893 | 1.9 | 128 | 0.4 |
| Nutrition science | 3,333 | 0.5 | 2,505 | 0.5 | 888 | 0.5 | 828 | 0.4 | 2,385 | 0.6 | 1,650 | 0.6 | 735 | 0.6 | 735 | 0.5 | 948 | 0.3 | 855 | 0.3 | 153 | 0.3 | 93 | 0.3 |
| Pathology and experimental pathology | 930 | 0.1 | 859 | 0.2 | 154 | 0.1 | 71 | * | 87 | * | 69 | * | 34 | * | 18 | * | 843 | 0.3 | 790 | 0.3 | 120 | 0.3 | 53 | 0.2 |
| Pharmacology and toxicology | 3,074 | 0.4 | 2,575 | 0.5 | 603 | 0.4 | 499 | 0.3 | 923 | 0.2 | 502 | 0.2 | 289 | 0.2 | 421 | 0.3 | 2,151 | 0.8 | 2,073 | 0.8 | 314 | 0.7 | 78 | 0.2 |
| Physiology | 5,297 | 0.8 | 4,550 | 0.9 | 1,473 | 0.9 | 747 | 0.4 | 2,594 | 0.6 | 1,993 | 0.8 | 1,090 | 0.9 | 601 | 0.4 | 2,703 | 1.0 | 2,557 | 1.0 | 383 | 0.8 | 146 | 0.4 |
| Zoology and animal biology | 2,089 | 0.3 | 1,677 | 0.3 | 373 | 0.2 | 412 | 0.2 | 891 | 0.2 | 624 | 0.2 | 205 | 0.2 | 267 | 0.2 | 1,198 | 0.4 | 1,053 | 0.4 | 168 | 0.4 | 145 | 0.4 |
| Biological and biomedical sciences nec | 5,135 | 0.7 | 4,256 | 0.8 | 2,005 | 1.2 | 879 | 0.5 | 2,589 | 0.6 | 1,905 | 0.7 | 1,200 | 1.0 | 684 | 0.4 | 2,546 | 0.9 | 2,351 | 0.9 | 805 | 1.7 | 195 | 0.6 |
| Computer and information sciences | 101,284 | 14.7 | 62,120 | 12.4 | 23,781 | 14.6 | 39,164 | 20.9 | 84,092 | 20.6 | 47,535 | 18.7 | 20,788 | 17.8 | 36,557 | 23.8 | 17,192 | 6.1 | 14,585 | 5.9 | 2,993 | 6.4 | 2,607 | 7.7 |
| Computer science | 33,274 | 4.8 | 25,824 | 5.1 | 9,479 | 5.8 | 7,450 | 4.0 | 24,628 | 6.0 | 18,227 | 7.2 | 7,909 | 6.8 | 6,401 | 4.2 | 8,646 | 3.1 | 7,597 | 3.1 | 1,570 | 3.4 | 1,049 | 3.1 |
| Computer and information sciences, general | 40,650 | 5.9 | 22,841 | 4.5 | 8,883 | 5.4 | 17,809 | 9.5 | 33,698 | 8.3 | 16,865 | 6.6 | 7,667 | 6.6 | 16,833 | 11.0 | 6,952 | 2.5 | 5,976 | 2.4 | 1,216 | 2.6 | 976 | 2.9 |
| Computer and information sciences nec | 27,360 | 4.0 | 13,455 | 2.7 | 5,419 | 3.3 | 13,905 | 7.4 | 25,766 | 6.3 | 12,443 | 4.9 | 5,212 | 4.5 | 13,323 | 8.7 | 1,594 | 0.6 | 1,012 | 0.4 | 207 | 0.4 | 582 | 1.7 |
| Geosciences, atmospheric sciences, and ocean sciences | 11,878 | 1.7 | 9,521 | 1.9 | 2,501 | 1.5 | 2,357 | 1.3 | 5,327 | 1.3 | 3,675 | 1.4 | 1,487 | 1.3 | 1,652 | 1.1 | 6,551 | 2.3 | 5,846 | 2.4 | 1,014 | 2.2 | 705 | 2.1 |
| Atmospheric sciences and meteorology | 1,339 | 0.2 | 1,181 | 0.2 | 309 | 0.2 | 158 | 0.1 | 473 | 0.1 | 416 | 0.2 | 171 | 0.1 | 57 | * | 866 | 0.3 | 765 | 0.3 | 138 | 0.3 | 101 | 0.3 |
| Geological and earth sciences | 7,849 | 1.1 | 6,087 | 1.2 | 1,595 | 1.0 | 1,762 | 0.9 | 3,610 | 0.9 | 2,317 | 0.9 | 947 | 0.8 | 1,293 | 0.8 | 4,239 | 1.5 | 3,770 | 1.5 | 648 | 1.4 | 469 | 1.4 |
| Ocean and marine sciences | 2,690 | 0.4 | 2,253 | 0.4 | 597 | 0.4 | 437 | 0.2 | 1,244 | 0.3 | 942 | 0.4 | 369 | 0.3 | 302 | 0.2 | 1,446 | 0.5 | 1,311 | 0.5 | 228 | 0.5 | 135 | 0.4 |
| Mathematics and statistics | 33,159 | 4.8 | 25,681 | 5.1 | 9,348 | 5.7 | 7,478 | 4.0 | 19,594 | 4.8 | 13,359 | 5.2 | 6,772 | 5.8 | 6,235 | 4.1 | 13,565 | 4.8 | 12,322 | 5.0 | 2,576 | 5.5 | 1,243 | 3.7 |

TABLE 4-3

## Master's and doctoral students within science, engineering and health fields, by enrollment intensity: 2019

(Number and percent)

| Detailed field | All graduate students | | | | | | | | Master's students | | | | | | | | Doctoral students | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Full time | | | | Part time | | Total | | Full time | | | | Part time | | Total | | Full time | | | | Part time | |
| | | | All full time | | First time, full time | | | | | | All full time | | First time, full time | | | | | | All full time | | First time, full time | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Mathematics and applied mathematics | 22,241 | 3.2 | 17,778 | 3.5 | 6,124 | 3.8 | 4,463 | 2.4 | 11,933 | 2.9 | 8,392 | 3.3 | 4,194 | 3.6 | 3,541 | 2.3 | 10,308 | 3.7 | 9,386 | 3.8 | 1,930 | 4.1 | 922 | 2.7 |
| Statistics | 10,918 | 1.6 | 7,903 | 1.6 | 3,224 | 2.0 | 3,015 | 1.6 | 7,661 | 1.9 | 4,967 | 2.0 | 2,578 | 2.2 | 2,694 | 1.8 | 3,257 | 1.2 | 2,936 | 1.2 | 646 | 1.4 | 321 | 0.9 |
| Multidisciplinary and interdisciplinary studies | 11,181 | 1.6 | 7,033 | 1.4 | 2,886 | 1.8 | 4,148 | 2.2 | 8,203 | 2.0 | 4,669 | 1.8 | 2,397 | 2.1 | 3,534 | 2.3 | 2,978 | 1.1 | 2,364 | 1.0 | 489 | 1.1 | 614 | 1.8 |
| Natural resources and conservation | 11,743 | 1.7 | 8,101 | 1.6 | 2,536 | 1.6 | 3,642 | 1.9 | 8,066 | 2.0 | 5,176 | 2.0 | 2,081 | 1.8 | 2,890 | 1.9 | 3,677 | 1.3 | 2,925 | 1.2 | 455 | 1.0 | 752 | 2.2 |
| Environmental science and studies | 5,621 | 0.8 | 3,926 | 0.8 | 1,360 | 0.8 | 1,695 | 0.9 | 3,883 | 1.0 | 2,525 | 1.0 | 1,112 | 1.0 | 1,358 | 0.9 | 1,738 | 0.6 | 1,401 | 0.6 | 248 | 0.5 | 337 | 1.0 |
| Forestry, natural resources, and conservation | 6,122 | 0.9 | 4,175 | 0.8 | 1,176 | 0.7 | 1,947 | 1.0 | 4,183 | 1.0 | 2,651 | 1.0 | 969 | 0.8 | 1,532 | 1.0 | 1,939 | 0.7 | 1,524 | 0.6 | 207 | 0.4 | 415 | 1.2 |
| Physical sciences | 42,867 | 6.2 | 38,162 | 7.6 | 8,308 | 5.1 | 4,705 | 2.5 | 6,361 | 1.6 | 3,878 | 1.5 | 1,627 | 1.4 | 2,483 | 1.6 | 36,506 | 13.0 | 34,284 | 13.8 | 6,681 | 14.4 | 2,222 | 6.5 |
| Astronomy and astrophysics | 1,450 | 0.2 | 1,389 | 0.3 | 275 | 0.2 | 61 | * | 77 | * | 47 | * | 26 | * | 30 | * | 1,373 | 0.5 | 1,342 | 0.5 | 249 | 0.5 | 31 | 0.1 |
| Chemistry | 22,900 | 3.3 | 20,508 | 4.1 | 4,537 | 2.8 | 2,392 | 1.3 | 3,152 | 0.8 | 1,914 | 0.8 | 795 | 0.7 | 1,238 | 0.8 | 19,748 | 7.0 | 18,594 | 7.5 | 3,742 | 8.0 | 1,154 | 3.4 |
| Materials sciences | 1,552 | 0.2 | 1,373 | 0.3 | 380 | 0.2 | 179 | 0.1 | 539 | 0.1 | 407 | 0.2 | 193 | 0.2 | 132 | 0.1 | 1,013 | 0.4 | 966 | 0.4 | 187 | 0.4 | 47 | 0.1 |
| Physics | 16,115 | 2.3 | 14,384 | 2.9 | 2,949 | 1.8 | 1,731 | 0.9 | 2,164 | 0.5 | 1,362 | 0.5 | 535 | 0.5 | 802 | 0.5 | 13,951 | 4.9 | 13,022 | 5.3 | 2,414 | 5.2 | 929 | 2.7 |
| Physical sciences nec | 850 | 0.1 | 508 | 0.1 | 167 | 0.1 | 342 | 0.2 | 429 | 0.1 | 148 | 0.1 | 78 | 0.1 | 281 | 0.2 | 421 | 0.1 | 360 | 0.1 | 89 | 0.2 | 61 | 0.2 |
| Psychology | 61,069 | 8.8 | 41,093 | 8.2 | 13,001 | 8.0 | 19,976 | 10.6 | 40,838 | 10.0 | 24,547 | 9.6 | 9,668 | 8.3 | 16,291 | 10.6 | 20,231 | 7.2 | 16,546 | 6.7 | 3,333 | 7.2 | 3,685 | 10.8 |
| Clinical psychology | 7,372 | 1.1 | 5,459 | 1.1 | 1,453 | 0.9 | 1,913 | 1.0 | 3,587 | 0.9 | 2,353 | 0.9 | 838 | 0.7 | 1,234 | 0.8 | 3,785 | 1.3 | 3,106 | 1.3 | 615 | 1.3 | 679 | 2.0 |
| Counseling and applied psychology | 35,859 | 5.2 | 21,591 | 4.3 | 7,327 | 4.5 | 14,268 | 7.6 | 29,322 | 7.2 | 16,978 | 6.7 | 6,404 | 5.5 | 12,344 | 8.0 | 6,537 | 2.3 | 4,613 | 1.9 | 923 | 2.0 | 1,924 | 5.7 |
| Psychology, general | 13,106 | 1.9 | 10,119 | 2.0 | 3,169 | 1.9 | 2,987 | 1.6 | 6,357 | 1.6 | 4,182 | 1.6 | 1,934 | 1.7 | 2,175 | 1.4 | 6,749 | 2.4 | 5,937 | 2.4 | 1,235 | 2.7 | 812 | 2.4 |
| Research and experimental psychology | 4,732 | 0.7 | 3,924 | 0.8 | 1,052 | 0.6 | 808 | 0.4 | 1,572 | 0.4 | 1,034 | 0.4 | 492 | 0.4 | 538 | 0.4 | 3,160 | 1.1 | 2,890 | 1.2 | 560 | 1.2 | 270 | 0.8 |
| Social sciences | 78,999 | 11.4 | 56,980 | 11.3 | 18,394 | 11.3 | 22,019 | 11.7 | 43,607 | 10.7 | 26,604 | 10.5 | 13,053 | 11.2 | 17,003 | 11.1 | 35,392 | 12.6 | 30,376 | 12.3 | 5,341 | 11.5 | 5,016 | 14.8 |
| Agricultural economics | 1,506 | 0.2 | 1,330 | 0.3 | 424 | 0.3 | 176 | 0.1 | 700 | 0.2 | 609 | 0.2 | 297 | 0.3 | 91 | 0.1 | 806 | 0.3 | 721 | 0.3 | 127 | 0.3 | 85 | 0.3 |
| Anthropology | 6,598 | 1.0 | 5,211 | 1.0 | 1,210 | 0.7 | 1,387 | 0.7 | 2,233 | 0.5 | 1,394 | 0.5 | 666 | 0.6 | 839 | 0.5 | 4,365 | 1.5 | 3,817 | 1.5 | 544 | 1.2 | 548 | 1.6 |
| Criminal justice and safety studies | 5,817 | 0.8 | 2,641 | 0.5 | 978 | 0.6 | 3,176 | 1.7 | 4,917 | 1.2 | 2,030 | 0.8 | 836 | 0.7 | 2,887 | 1.9 | 900 | 0.3 | 611 | 0.2 | 142 | 0.3 | 289 | 0.9 |
| Economics (except agricultural) | 14,129 | 2.0 | 12,072 | 2.4 | 4,026 | 2.5 | 2,057 | 1.1 | 6,084 | 1.5 | 4,638 | 1.8 | 2,596 | 2.2 | 1,446 | 0.9 | 8,045 | 2.9 | 7,434 | 3.0 | 1,430 | 3.1 | 611 | 1.8 |
| Geography and cartography | 4,401 | 0.6 | 2,882 | 0.6 | 883 | 0.5 | 1,519 | 0.8 | 2,660 | 0.7 | 1,410 | 0.6 | 648 | 0.6 | 1,250 | 0.8 | 1,741 | 0.6 | 1,472 | 0.6 | 235 | 0.5 | 269 | 0.8 |
| History and philosophy of science | 289 | * | 250 | * | 46 | * | 39 | * | 32 | * | 19 | * | 7 | * | 13 | * | 257 | 0.1 | 231 | 0.1 | 39 | 0.1 | 26 | 0.1 |
| Human development | 2,070 | 0.3 | 1,346 | 0.3 | 452 | 0.3 | 724 | 0.4 | 1,339 | 0.3 | 794 | 0.3 | 344 | 0.3 | 545 | 0.4 | 731 | 0.3 | 552 | 0.2 | 108 | 0.2 | 179 | 0.5 |
| International relations and national security studies | 7,070 | 1.0 | 4,397 | 0.9 | 1,951 | 1.2 | 2,673 | 1.4 | 6,657 | 1.6 | 4,060 | 1.6 | 1,894 | 1.6 | 2,597 | 1.7 | 413 | 0.1 | 337 | 0.1 | 57 | 0.1 | 76 | 0.2 |
| Linguistics | 2,769 | 0.4 | 2,115 | 0.4 | 564 | 0.3 | 654 | 0.3 | 1,153 | 0.3 | 642 | 0.3 | 304 | 0.3 | 511 | 0.3 | 1,616 | 0.6 | 1,473 | 0.6 | 260 | 0.6 | 143 | 0.4 |
| Political science and government | 8,385 | 1.2 | 6,298 | 1.3 | 1,533 | 0.9 | 2,087 | 1.1 | 2,897 | 0.7 | 1,475 | 0.6 | 661 | 0.6 | 1,422 | 0.9 | 5,488 | 1.9 | 4,823 | 1.9 | 872 | 1.9 | 665 | 2.0 |
| Public policy analysis | 8,711 | 1.3 | 5,994 | 1.2 | 2,626 | 1.6 | 2,717 | 1.4 | 6,297 | 1.5 | 4,386 | 1.7 | 2,305 | 2.0 | 1,911 | 1.2 | 2,414 | 0.9 | 1,608 | 0.6 | 321 | 0.7 | 806 | 2.4 |
| Sociology | 7,333 | 1.1 | 5,662 | 1.1 | 1,299 | 0.8 | 1,671 | 0.9 | 2,263 | 0.6 | 1,254 | 0.5 | 596 | 0.5 | 1,009 | 0.7 | 5,070 | 1.8 | 4,408 | 1.8 | 703 | 1.5 | 662 | 1.9 |
| Social sciences nec | 9,921 | 1.4 | 6,782 | 1.3 | 2,402 | 1.5 | 3,139 | 1.7 | 6,375 | 1.6 | 3,893 | 1.5 | 1,899 | 1.6 | 2,482 | 1.6 | 3,546 | 1.3 | 2,889 | 1.2 | 503 | 1.1 | 657 | 1.9 |
| Engineering | 164,004 | 23.8 | 121,117 | 24.1 | 38,631 | 23.7 | 42,887 | 22.9 | 91,939 | 22.5 | 57,723 | 22.7 | 27,307 | 23.4 | 34,216 | 22.3 | 72,065 | 25.6 | 63,394 | 25.6 | 11,324 | 24.3 | 8,671 | 25.5 |
| Aerospace, aeronautical, and astronautical engineering | 6,255 | 0.9 | 4,435 | 0.9 | 1,327 | 0.8 | 1,820 | 1.0 | 3,701 | 0.9 | 2,197 | 0.9 | 979 | 0.8 | 1,504 | 1.0 | 2,554 | 0.9 | 2,238 | 0.9 | 348 | 0.7 | 316 | 0.9 |

TABLE 4-3

## Master's and doctoral students within science, engineering and health fields, by enrollment intensity: 2019

(Number and percent)

| Detailed field | All graduate students | | | | | | | | Master's students | | | | | | | | Doctoral students | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Full time | | | | Part time | | Total | | Full time | | | | Part time | | Total | | Full time | | | | Part time | |
| | | | All full time | | First time, full time | | | | | | All full time | | First time, full time | | | | | | All full time | | First time, full time | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Agricultural engineering | 1,156 | 0.2 | 954 | 0.2 | 259 | 0.2 | 202 | 0.1 | 494 | 0.1 | 393 | 0.2 | 172 | 0.1 | 101 | 0.1 | 662 | 0.2 | 561 | 0.2 | 87 | 0.2 | 101 | 0.3 |
| Bioengineering and biomedical engineering | 12,050 | 1.7 | 10,453 | 2.1 | 3,364 | 2.1 | 1,597 | 0.9 | 4,335 | 1.1 | 3,353 | 1.3 | 1,934 | 1.7 | 982 | 0.6 | 7,715 | 2.7 | 7,100 | 2.9 | 1,430 | 3.1 | 615 | 1.8 |
| Biological and biosystems engineering | 308 | * | 231 | * | 70 | * | 77 | * | 89 | * | 64 | * | 38 | * | 25 | * | 219 | 0.1 | 167 | 0.1 | 32 | 0.1 | 52 | 0.2 |
| Chemical engineering | 9,689 | 1.4 | 8,565 | 1.7 | 2,348 | 1.4 | 1,124 | 0.6 | 2,632 | 0.6 | 1,888 | 0.7 | 969 | 0.8 | 744 | 0.5 | 7,057 | 2.5 | 6,677 | 2.7 | 1,379 | 3.0 | 380 | 1.1 |
| Civil engineering | 19,625 | 2.8 | 14,302 | 2.8 | 4,700 | 2.9 | 5,323 | 2.8 | 11,873 | 2.9 | 7,576 | 3.0 | 3,586 | 3.1 | 4,297 | 2.8 | 7,752 | 2.8 | 6,726 | 2.7 | 1,114 | 2.4 | 1,026 | 3.0 |
| Electrical, electronics, and communications engineering | 46,754 | 6.8 | 35,426 | 7.1 | 11,632 | 7.1 | 11,328 | 6.0 | 28,177 | 6.9 | 19,138 | 7.5 | 8,801 | 7.6 | 9,039 | 5.9 | 18,577 | 6.6 | 16,288 | 6.6 | 2,831 | 6.1 | 2,289 | 6.7 |
| Engineering mechanics, physics, and science | 2,299 | 0.3 | 1,883 | 0.4 | 555 | 0.3 | 416 | 0.2 | 852 | 0.2 | 563 | 0.2 | 297 | 0.3 | 289 | 0.2 | 1,447 | 0.5 | 1,320 | 0.5 | 258 | 0.6 | 127 | 0.4 |
| Industrial and manufacturing engineering | 15,674 | 2.3 | 9,186 | 1.8 | 3,682 | 2.3 | 6,488 | 3.5 | 11,912 | 2.9 | 6,247 | 2.5 | 3,157 | 2.7 | 5,665 | 3.7 | 3,762 | 1.3 | 2,939 | 1.2 | 525 | 1.1 | 823 | 2.4 |
| Mechanical engineering | 26,108 | 3.8 | 19,345 | 3.9 | 5,854 | 3.6 | 6,763 | 3.6 | 14,861 | 3.6 | 9,394 | 3.7 | 4,217 | 3.6 | 5,467 | 3.6 | 11,247 | 4.0 | 9,951 | 4.0 | 1,637 | 3.5 | 1,296 | 3.8 |
| Metallurgical and materials engineering | 6,590 | 1.0 | 5,652 | 1.1 | 1,440 | 0.9 | 938 | 0.5 | 1,974 | 0.5 | 1,409 | 0.6 | 683 | 0.6 | 565 | 0.4 | 4,616 | 1.6 | 4,243 | 1.7 | 757 | 1.6 | 373 | 1.1 |
| Mining engineering | 493 | 0.1 | 361 | 0.1 | 112 | 0.1 | 132 | 0.1 | 292 | 0.1 | 202 | 0.1 | 92 | 0.1 | 90 | 0.1 | 201 | 0.1 | 159 | 0.1 | 20 | * | 42 | 0.1 |
| Nanotechnology | 195 | * | 179 | * | 61 | * | 16 | * | 49 | * | 38 | * | 23 | * | 11 | * | 146 | 0.1 | 141 | 0.1 | 38 | 0.1 | 5 | * |
| Nuclear engineering | 1,449 | 0.2 | 1,186 | 0.2 | 260 | 0.2 | 263 | 0.1 | 418 | 0.1 | 307 | 0.1 | 127 | 0.1 | 111 | 0.1 | 1,031 | 0.4 | 879 | 0.4 | 133 | 0.3 | 152 | 0.4 |
| Petroleum engineering | 1,249 | 0.2 | 984 | 0.2 | 243 | 0.1 | 265 | 0.1 | 642 | 0.2 | 441 | 0.2 | 155 | 0.1 | 201 | 0.1 | 607 | 0.2 | 543 | 0.2 | 88 | 0.2 | 64 | 0.2 |
| Engineering nec | 14,110 | 2.0 | 7,975 | 1.6 | 2,724 | 1.7 | 6,135 | 3.3 | 9,638 | 2.4 | 4,513 | 1.8 | 2,077 | 1.8 | 5,125 | 3.3 | 4,472 | 1.6 | 3,462 | 1.4 | 647 | 1.4 | 1,010 | 3.0 |
| Health | 72,422 | 10.5 | 49,652 | 9.9 | 18,876 | 11.6 | 22,770 | 12.1 | 56,494 | 13.8 | 38,105 | 15.0 | 16,575 | 14.2 | 18,389 | 12.0 | 15,928 | 5.7 | 11,547 | 4.7 | 2,301 | 4.9 | 4,381 | 12.9 |
| Clinical medicine[a] | 30,822 | 4.5 | 18,924 | 3.8 | 7,684 | 4.7 | 11,898 | 6.3 | 26,251 | 6.4 | 15,638 | 6.1 | 7,046 | 6.0 | 10,613 | 6.9 | 4,571 | 1.6 | 3,286 | 1.3 | 638 | 1.4 | 1,285 | 3.8 |
| Public health | 29,594 | 4.3 | 18,119 | 3.6 | 7,328 | 4.5 | 11,475 | 6.1 | 25,403 | 6.2 | 15,144 | 5.9 | 6,772 | 5.8 | 10,259 | 6.7 | 4,191 | 1.5 | 2,975 | 1.2 | 556 | 1.2 | 1,216 | 3.6 |
| Clinical medicine nec | 1,228 | 0.2 | 805 | 0.2 | 356 | 0.2 | 423 | 0.2 | 848 | 0.2 | 494 | 0.2 | 274 | 0.2 | 354 | 0.2 | 380 | 0.1 | 311 | 0.1 | 82 | 0.2 | 69 | 0.2 |
| Other health | 41,600 | 6.0 | 30,728 | 6.1 | 11,192 | 6.9 | 10,872 | 5.8 | 30,243 | 7.4 | 22,467 | 8.8 | 9,529 | 8.2 | 7,776 | 5.1 | 11,357 | 4.0 | 8,261 | 3.3 | 1,663 | 3.6 | 3,096 | 9.1 |
| Communication disorders sciences | 17,257 | 2.5 | 15,247 | 3.0 | 6,283 | 3.9 | 2,010 | 1.1 | 16,346 | 4.0 | 14,442 | 5.7 | 6,128 | 5.3 | 1,904 | 1.2 | 911 | 0.3 | 805 | 0.3 | 155 | 0.3 | 106 | 0.3 |
| Dental sciences | 1,523 | 0.2 | 1,399 | 0.3 | 388 | 0.2 | 124 | 0.1 | 1,315 | 0.3 | 1,200 | 0.5 | 353 | 0.3 | 115 | 0.1 | 208 | 0.1 | 199 | 0.1 | 35 | 0.1 | 9 | * |
| Nursing science | 5,300 | 0.8 | 2,614 | 0.5 | 602 | 0.4 | 2,686 | 1.4 | 1,861 | 0.5 | 733 | 0.3 | 199 | 0.2 | 1,128 | 0.7 | 3,439 | 1.2 | 1,881 | 0.8 | 403 | 0.9 | 1,558 | 4.6 |
| Pharmaceutical sciences | 4,308 | 0.6 | 3,617 | 0.7 | 937 | 0.6 | 691 | 0.4 | 1,187 | 0.3 | 832 | 0.3 | 368 | 0.3 | 355 | 0.2 | 3,121 | 1.1 | 2,785 | 1.1 | 569 | 1.2 | 336 | 1.0 |
| Veterinary biomedical and clinical sciences | 1,573 | 0.2 | 962 | 0.2 | 265 | 0.2 | 611 | 0.3 | 881 | 0.2 | 344 | 0.1 | 134 | 0.1 | 537 | 0.3 | 692 | 0.2 | 618 | 0.2 | 131 | 0.3 | 74 | 0.2 |
| Other health nec | 11,639 | 1.7 | 6,889 | 1.4 | 2,717 | 1.7 | 4,750 | 2.5 | 8,653 | 2.1 | 4,916 | 1.9 | 2,347 | 2.0 | 3,737 | 2.4 | 2,986 | 1.1 | 1,973 | 0.8 | 370 | 0.8 | 1,013 | 3.0 |

* = value < 0.05%.

nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-4a

## Citizenship, ethnicity, and race of graduate students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All detailed fields | 690,117 | 100.0 | 54,467 | 100.0 | 2,077 | 100.0 | 48,844 | 100.0 | 38,048 | 100.0 | 744 | 100.0 | 272,545 | 100.0 | 15,613 | 100.0 | 24,166 | 100.0 | 233,613 | 100.0 |
| Science | 453,691 | 65.7 | 38,193 | 70.1 | 1,526 | 73.5 | 31,482 | 64.5 | 26,450 | 69.5 | 542 | 72.8 | 186,405 | 68.4 | 10,902 | 69.8 | 16,868 | 69.8 | 141,323 | 60.5 |
| Agricultural sciences | 9,518 | 1.4 | 636 | 1.2 | 33 | 1.6 | 267 | 0.5 | 329 | 0.9 | 16 | 2.2 | 5,003 | 1.8 | 186 | 1.2 | 181 | 0.7 | 2,867 | 1.2 |
| Biological and biomedical sciences | 91,993 | 13.3 | 8,450 | 15.5 | 276 | 13.3 | 8,819 | 18.1 | 5,270 | 13.9 | 147 | 19.8 | 43,821 | 16.1 | 2,630 | 16.8 | 3,680 | 15.2 | 18,900 | 8.1 |
| Biochemistry | 5,342 | 0.8 | 516 | 0.9 | 10 | 0.5 | 456 | 0.9 | 189 | 0.5 | 7 | 0.9 | 2,410 | 0.9 | 153 | 1.0 | 118 | 0.5 | 1,483 | 0.6 |
| Biology | 15,801 | 2.3 | 1,690 | 3.1 | 61 | 2.9 | 994 | 2.0 | 855 | 2.2 | 20 | 2.7 | 8,531 | 3.1 | 455 | 2.9 | 479 | 2.0 | 2,716 | 1.2 |
| Biomedical sciences | 9,820 | 1.4 | 952 | 1.7 | 30 | 1.4 | 1,380 | 2.8 | 1,033 | 2.7 | 39 | 5.2 | 4,073 | 1.5 | 320 | 2.0 | 586 | 2.4 | 1,407 | 0.6 |
| Biophysics | 897 | 0.1 | 71 | 0.1 | 1 | * | 93 | 0.2 | 19 | * | 0 | 0.0 | 368 | 0.1 | 18 | 0.1 | 37 | 0.2 | 290 | 0.1 |
| Biostatistics and bioinformatics | 6,228 | 0.9 | 267 | 0.5 | 7 | 0.3 | 760 | 1.6 | 173 | 0.5 | 5 | 0.7 | 1,929 | 0.7 | 139 | 0.9 | 232 | 1.0 | 2,716 | 1.2 |
| Biotechnology | 3,255 | 0.5 | 307 | 0.6 | 2 | 0.1 | 447 | 0.9 | 336 | 0.9 | 5 | 0.7 | 1,177 | 0.4 | 101 | 0.6 | 182 | 0.8 | 698 | 0.3 |
| Botany and plant biology | 1,687 | 0.2 | 136 | 0.2 | 4 | 0.2 | 76 | 0.2 | 37 | 0.1 | 4 | 0.5 | 801 | 0.3 | 48 | 0.3 | 52 | 0.2 | 529 | 0.2 |
| Cell, cellular biology, and anatomical sciences | 5,902 | 0.9 | 615 | 1.1 | 17 | 0.8 | 598 | 1.2 | 204 | 0.5 | 7 | 0.9 | 2,728 | 1.0 | 169 | 1.1 | 199 | 0.8 | 1,365 | 0.6 |
| Ecology and population biology | 3,510 | 0.5 | 286 | 0.5 | 11 | 0.5 | 121 | 0.2 | 95 | 0.2 | 7 | 0.9 | 2,260 | 0.8 | 100 | 0.6 | 129 | 0.5 | 501 | 0.2 |
| Epidemiology | 4,692 | 0.7 | 399 | 0.7 | 13 | 0.6 | 612 | 1.3 | 322 | 0.8 | 5 | 0.7 | 1,874 | 0.7 | 164 | 1.1 | 194 | 0.8 | 1,109 | 0.5 |
| Genetics | 2,663 | 0.4 | 213 | 0.4 | 11 | 0.5 | 240 | 0.5 | 83 | 0.2 | 3 | 0.4 | 1,432 | 0.5 | 69 | 0.4 | 77 | 0.3 | 535 | 0.2 |
| Microbiological sciences and immunology | 5,307 | 0.8 | 553 | 1.0 | 21 | 1.0 | 458 | 0.9 | 257 | 0.7 | 3 | 0.4 | 2,779 | 1.0 | 161 | 1.0 | 219 | 0.9 | 856 | 0.4 |
| Molecular biology | 1,531 | 0.2 | 165 | 0.3 | 4 | 0.2 | 167 | 0.3 | 76 | 0.2 | 0 | 0.0 | 665 | 0.2 | 46 | 0.3 | 58 | 0.2 | 350 | 0.1 |
| Neurobiology and neuroscience | 5,500 | 0.8 | 580 | 1.1 | 19 | 0.9 | 557 | 1.1 | 232 | 0.6 | 1 | 0.1 | 2,832 | 1.0 | 173 | 1.1 | 190 | 0.8 | 916 | 0.4 |
| Nutrition science | 3,333 | 0.5 | 260 | 0.5 | 6 | 0.3 | 221 | 0.5 | 108 | 0.3 | 6 | 0.8 | 2,008 | 0.7 | 93 | 0.6 | 116 | 0.5 | 515 | 0.2 |
| Pathology and experimental pathology | 930 | 0.1 | 118 | 0.2 | 3 | 0.1 | 71 | 0.1 | 35 | 0.1 | 2 | 0.3 | 396 | 0.1 | 23 | 0.1 | 60 | 0.2 | 222 | 0.1 |
| Pharmacology and toxicology | 3,074 | 0.4 | 251 | 0.5 | 8 | 0.4 | 338 | 0.7 | 211 | 0.6 | 4 | 0.5 | 1,338 | 0.5 | 96 | 0.6 | 120 | 0.5 | 708 | 0.3 |
| Physiology | 5,297 | 0.8 | 399 | 0.7 | 19 | 0.9 | 550 | 1.1 | 397 | 1.0 | 8 | 1.1 | 2,639 | 1.0 | 137 | 0.9 | 241 | 1.0 | 907 | 0.4 |
| Zoology and animal biology | 2,089 | 0.3 | 141 | 0.3 | 6 | 0.3 | 55 | 0.1 | 59 | 0.2 | 1 | 0.1 | 1,325 | 0.5 | 59 | 0.4 | 90 | 0.4 | 353 | 0.2 |
| Biological and biomedical sciences nec | 5,135 | 0.7 | 531 | 1.0 | 23 | 1.1 | 625 | 1.3 | 549 | 1.4 | 20 | 2.7 | 2,256 | 0.8 | 106 | 0.7 | 301 | 1.2 | 724 | 0.3 |
| Computer and information sciences | 101,284 | 14.7 | 4,203 | 7.7 | 119 | 5.7 | 9,343 | 19.1 | 5,247 | 13.8 | 69 | 9.3 | 23,620 | 8.7 | 1,587 | 10.2 | 2,921 | 12.1 | 54,175 | 23.2 |
| Computer science | 33,274 | 4.8 | 802 | 1.5 | 17 | 0.8 | 2,667 | 5.5 | 601 | 1.6 | 9 | 1.2 | 5,264 | 1.9 | 406 | 2.6 | 901 | 3.7 | 22,607 | 9.7 |
| Computer and information sciences, general | 40,650 | 5.9 | 1,694 | 3.1 | 55 | 2.6 | 4,161 | 8.5 | 1,616 | 4.2 | 25 | 3.4 | 10,137 | 3.7 | 620 | 4.0 | 786 | 3.3 | 21,556 | 9.2 |
| Computer and information sciences nec | 27,360 | 4.0 | 1,707 | 3.1 | 47 | 2.3 | 2,515 | 5.1 | 3,030 | 8.0 | 35 | 4.7 | 8,219 | 3.0 | 561 | 3.6 | 1,234 | 5.1 | 10,012 | 4.3 |
| Geosciences, atmospheric sciences, and ocean sciences | 11,878 | 1.7 | 882 | 1.6 | 39 | 1.9 | 377 | 0.8 | 258 | 0.7 | 9 | 1.2 | 7,080 | 2.6 | 320 | 2.0 | 361 | 1.5 | 2,552 | 1.1 |
| Atmospheric sciences and meteorology | 1,339 | 0.2 | 63 | 0.1 | 1 | * | 28 | 0.1 | 31 | 0.1 | 0 | 0.0 | 761 | 0.3 | 26 | 0.2 | 39 | 0.2 | 390 | 0.2 |
| Geological and earth sciences | 7,849 | 1.1 | 593 | 1.1 | 34 | 1.6 | 250 | 0.5 | 181 | 0.5 | 7 | 0.9 | 4,611 | 1.7 | 203 | 1.3 | 213 | 0.9 | 1,757 | 0.8 |
| Ocean and marine sciences | 2,690 | 0.4 | 226 | 0.4 | 4 | 0.2 | 99 | 0.2 | 46 | 0.1 | 2 | 0.3 | 1,708 | 0.6 | 91 | 0.6 | 109 | 0.5 | 405 | 0.2 |
| Mathematics and statistics | 33,159 | 4.8 | 1,679 | 3.1 | 57 | 2.7 | 2,391 | 4.9 | 716 | 1.9 | 7 | 0.9 | 9,913 | 3.6 | 486 | 3.1 | 1,001 | 4.1 | 16,909 | 7.2 |
| Mathematics and applied mathematics | 22,241 | 3.2 | 1,268 | 2.3 | 30 | 1.4 | 1,366 | 2.8 | 503 | 1.3 | 2 | 0.3 | 7,246 | 2.7 | 356 | 2.3 | 731 | 3.0 | 10,739 | 4.6 |

TABLE 4-4a

## Citizenship, ethnicity, and race of graduate students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Statistics | 10,918 | 1.6 | 411 | 0.8 | 27 | 1.3 | 1,025 | 2.1 | 213 | 0.6 | 5 | 0.7 | 2,667 | 1.0 | 130 | 0.8 | 270 | 1.1 | 6,170 | 2.6 |
| Multidisciplinary and interdisciplinary studies | 11,181 | 1.6 | 935 | 1.7 | 36 | 1.7 | 880 | 1.8 | 788 | 2.1 | 20 | 2.7 | 4,807 | 1.8 | 292 | 1.9 | 356 | 1.5 | 3,067 | 1.3 |
| Natural resources and conservation | 11,743 | 1.7 | 989 | 1.8 | 122 | 5.9 | 358 | 0.7 | 364 | 1.0 | 23 | 3.1 | 7,388 | 2.7 | 355 | 2.3 | 441 | 1.8 | 1,703 | 0.7 |
| Environmental science and studies | 5,621 | 0.8 | 592 | 1.1 | 53 | 2.6 | 204 | 0.4 | 192 | 0.5 | 16 | 2.2 | 3,314 | 1.2 | 157 | 1.0 | 233 | 1.0 | 860 | 0.4 |
| Forestry, natural resources, and conservation | 6,122 | 0.9 | 397 | 0.7 | 69 | 3.3 | 154 | 0.3 | 172 | 0.5 | 7 | 0.9 | 4,074 | 1.5 | 198 | 1.3 | 208 | 0.9 | 843 | 0.4 |
| Physical sciences | 42,867 | 6.2 | 2,792 | 5.1 | 89 | 4.3 | 2,400 | 4.9 | 1,063 | 2.8 | 21 | 2.8 | 17,826 | 6.5 | 875 | 5.6 | 1,021 | 4.2 | 16,780 | 7.2 |
| Astronomy and astrophysics | 1,450 | 0.2 | 115 | 0.2 | 6 | 0.3 | 105 | 0.2 | 34 | 0.1 | 0 | 0.0 | 764 | 0.3 | 52 | 0.3 | 42 | 0.2 | 332 | 0.1 |
| Chemistry | 22,900 | 3.3 | 1,627 | 3.0 | 49 | 2.4 | 1,425 | 2.9 | 660 | 1.7 | 12 | 1.6 | 9,591 | 3.5 | 469 | 3.0 | 499 | 2.1 | 8,568 | 3.7 |
| Materials sciences | 1,552 | 0.2 | 77 | 0.1 | 3 | 0.1 | 104 | 0.2 | 50 | 0.1 | 1 | 0.1 | 467 | 0.2 | 16 | 0.1 | 45 | 0.2 | 789 | 0.3 |
| Physics | 16,115 | 2.3 | 916 | 1.7 | 28 | 1.3 | 738 | 1.5 | 276 | 0.7 | 8 | 1.1 | 6,570 | 2.4 | 314 | 2.0 | 410 | 1.7 | 6,855 | 2.9 |
| Physical sciences nec | 850 | 0.1 | 57 | 0.1 | 3 | 0.1 | 28 | 0.1 | 43 | 0.1 | 0 | 0.0 | 434 | 0.2 | 24 | 0.2 | 25 | 0.1 | 236 | 0.1 |
| Psychology | 61,069 | 8.8 | 9,931 | 18.2 | 276 | 13.3 | 3,016 | 6.2 | 6,184 | 16.3 | 111 | 14.9 | 32,160 | 11.8 | 2,117 | 13.6 | 3,649 | 15.1 | 3,625 | 1.6 |
| Clinical psychology | 7,372 | 1.1 | 1,359 | 2.5 | 25 | 1.2 | 459 | 0.9 | 475 | 1.2 | 18 | 2.4 | 3,850 | 1.4 | 327 | 2.1 | 481 | 2.0 | 378 | 0.2 |
| Counseling and applied psychology | 35,859 | 5.2 | 6,346 | 11.7 | 166 | 8.0 | 1,542 | 3.2 | 4,314 | 11.3 | 70 | 9.4 | 18,264 | 6.7 | 1,141 | 7.3 | 2,640 | 10.9 | 1,376 | 0.6 |
| Psychology, general | 13,106 | 1.9 | 1,728 | 3.2 | 67 | 3.2 | 680 | 1.4 | 1,119 | 2.9 | 19 | 2.6 | 7,640 | 2.8 | 490 | 3.1 | 416 | 1.7 | 947 | 0.4 |
| Research and experimental psychology | 4,732 | 0.7 | 498 | 0.9 | 18 | 0.9 | 335 | 0.7 | 276 | 0.7 | 4 | 0.5 | 2,406 | 0.9 | 159 | 1.0 | 112 | 0.5 | 924 | 0.4 |
| Social sciences | 78,999 | 11.4 | 7,696 | 14.1 | 479 | 23.1 | 3,631 | 7.4 | 6,231 | 16.4 | 119 | 16.0 | 34,787 | 12.8 | 2,054 | 13.2 | 3,257 | 13.5 | 20,745 | 8.9 |
| Agricultural economics | 1,506 | 0.2 | 55 | 0.1 | 1 | * | 48 | 0.1 | 27 | 0.1 | 0 | 0.0 | 500 | 0.2 | 14 | 0.1 | 29 | 0.1 | 832 | 0.4 |
| Anthropology | 6,598 | 1.0 | 684 | 1.3 | 84 | 4.0 | 247 | 0.5 | 207 | 0.5 | 9 | 1.2 | 3,809 | 1.4 | 232 | 1.5 | 338 | 1.4 | 988 | 0.4 |
| Criminal justice and safety studies | 5,817 | 0.8 | 835 | 1.5 | 24 | 1.2 | 109 | 0.2 | 1,261 | 3.3 | 17 | 2.3 | 2,814 | 1.0 | 180 | 1.2 | 424 | 1.8 | 153 | 0.1 |
| Economics (except agricultural) | 14,129 | 2.0 | 539 | 1.0 | 12 | 0.6 | 692 | 1.4 | 324 | 0.9 | 7 | 0.9 | 3,464 | 1.3 | 154 | 1.0 | 329 | 1.4 | 8,608 | 3.7 |
| Geography and cartography | 4,401 | 0.6 | 333 | 0.6 | 31 | 1.5 | 155 | 0.3 | 171 | 0.4 | 5 | 0.7 | 2,445 | 0.9 | 118 | 0.8 | 147 | 0.6 | 996 | 0.4 |
| History and philosophy of science | 289 | * | 13 | * | 0 | 0.0 | 11 | * | 34 | 0.1 | 0 | 0.0 | 150 | 0.1 | 6 | * | 8 | * | 67 | * |
| Human development | 2,070 | 0.3 | 244 | 0.4 | 7 | 0.3 | 84 | 0.2 | 219 | 0.6 | 4 | 0.5 | 1,174 | 0.4 | 64 | 0.4 | 62 | 0.3 | 212 | 0.1 |
| International relations and national security studies | 7,070 | 1.0 | 814 | 1.5 | 16 | 0.8 | 371 | 0.8 | 513 | 1.3 | 7 | 0.9 | 3,513 | 1.3 | 190 | 1.2 | 462 | 1.9 | 1,184 | 0.5 |
| Linguistics | 2,769 | 0.4 | 237 | 0.4 | 36 | 1.7 | 151 | 0.3 | 65 | 0.2 | 1 | 0.1 | 1,233 | 0.5 | 78 | 0.5 | 95 | 0.4 | 873 | 0.4 |
| Political science and government | 8,385 | 1.2 | 741 | 1.4 | 25 | 1.2 | 326 | 0.7 | 528 | 1.4 | 11 | 1.5 | 4,197 | 1.5 | 207 | 1.3 | 351 | 1.5 | 1,999 | 0.9 |
| Public policy analysis | 8,711 | 1.3 | 764 | 1.4 | 31 | 1.5 | 612 | 1.3 | 802 | 2.1 | 16 | 2.2 | 3,953 | 1.5 | 247 | 1.6 | 397 | 1.6 | 1,889 | 0.8 |
| Sociology | 7,333 | 1.1 | 1,011 | 1.9 | 27 | 1.3 | 350 | 0.7 | 852 | 2.2 | 8 | 1.1 | 3,440 | 1.3 | 231 | 1.5 | 201 | 0.8 | 1,213 | 0.5 |
| Social sciences nec | 9,921 | 1.4 | 1,426 | 2.6 | 185 | 8.9 | 475 | 1.0 | 1,228 | 3.2 | 34 | 4.6 | 4,095 | 1.5 | 333 | 2.1 | 414 | 1.7 | 1,731 | 0.7 |
| Engineering | 164,004 | 23.8 | 8,643 | 15.9 | 242 | 11.7 | 11,390 | 23.3 | 4,220 | 11.1 | 95 | 12.8 | 48,892 | 17.9 | 2,773 | 17.8 | 3,727 | 15.4 | 84,022 | 36.0 |
| Aerospace, aeronautical, and astronautical engineering | 6,255 | 0.9 | 420 | 0.8 | 13 | 0.6 | 478 | 1.0 | 114 | 0.3 | 10 | 1.3 | 3,081 | 1.1 | 195 | 1.2 | 137 | 0.6 | 1,807 | 0.8 |
| Agricultural engineering | 1,156 | 0.2 | 38 | 0.1 | 2 | 0.1 | 54 | 0.1 | 26 | 0.1 | 1 | 0.1 | 399 | 0.1 | 24 | 0.2 | 13 | 0.1 | 599 | 0.3 |
| Bioengineering and biomedical engineering | 12,050 | 1.7 | 862 | 1.6 | 20 | 1.0 | 1,586 | 3.2 | 392 | 1.0 | 14 | 1.9 | 4,582 | 1.7 | 341 | 2.2 | 361 | 1.5 | 3,892 | 1.7 |

TABLE 4-4a

## Citizenship, ethnicity, and race of graduate students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Biological and biosystems engineering | 308 | * | 14 | * | 2 | 0.1 | 13 | * | 2 | * | 1 | 0.1 | 115 | * | 4 | * | 8 | * | 149 | 0.1 |
| Chemical engineering | 9,689 | 1.4 | 400 | 0.7 | 10 | 0.5 | 789 | 1.6 | 205 | 0.5 | 2 | 0.3 | 2,992 | 1.1 | 171 | 1.1 | 159 | 0.7 | 4,961 | 2.1 |
| Civil engineering | 19,625 | 2.8 | 1,284 | 2.4 | 44 | 2.1 | 1,053 | 2.2 | 481 | 1.3 | 9 | 1.2 | 6,002 | 2.2 | 316 | 2.0 | 438 | 1.8 | 9,998 | 4.3 |
| Electrical, electronics, and communications engineering | 46,754 | 6.8 | 1,799 | 3.3 | 40 | 1.9 | 3,236 | 6.6 | 893 | 2.3 | 12 | 1.6 | 9,190 | 3.4 | 521 | 3.3 | 958 | 4.0 | 30,105 | 12.9 |
| Engineering mechanics, physics, and science | 2,299 | 0.3 | 87 | 0.2 | 6 | 0.3 | 153 | 0.3 | 47 | 0.1 | 3 | 0.4 | 805 | 0.3 | 44 | 0.3 | 60 | 0.2 | 1,094 | 0.5 |
| Industrial and manufacturing engineering | 15,674 | 2.3 | 995 | 1.8 | 23 | 1.1 | 877 | 1.8 | 625 | 1.6 | 13 | 1.7 | 4,425 | 1.6 | 208 | 1.3 | 465 | 1.9 | 8,043 | 3.4 |
| Mechanical engineering | 26,108 | 3.8 | 1,510 | 2.8 | 40 | 1.9 | 1,624 | 3.3 | 472 | 1.2 | 12 | 1.6 | 8,533 | 3.1 | 492 | 3.2 | 583 | 2.4 | 12,842 | 5.5 |
| Metallurgical and materials engineering | 6,590 | 1.0 | 359 | 0.7 | 7 | 0.3 | 469 | 1.0 | 114 | 0.3 | 2 | 0.3 | 2,111 | 0.8 | 135 | 0.9 | 120 | 0.5 | 3,273 | 1.4 |
| Mining engineering | 493 | 0.1 | 22 | * | 3 | 0.1 | 6 | * | 13 | * | 1 | 0.1 | 238 | 0.1 | 10 | 0.1 | 11 | * | 189 | 0.1 |
| Nanotechnology | 195 | * | 14 | * | 0 | 0.0 | 18 | * | 8 | * | 0 | 0.0 | 67 | * | 7 | * | 6 | * | 75 | * |
| Nuclear engineering | 1,449 | 0.2 | 103 | 0.2 | 2 | 0.1 | 55 | 0.1 | 25 | 0.1 | 0 | 0.0 | 757 | 0.3 | 31 | 0.2 | 35 | 0.1 | 441 | 0.2 |
| Petroleum engineering | 1,249 | 0.2 | 39 | 0.1 | 2 | 0.1 | 48 | 0.1 | 27 | 0.1 | 0 | 0.0 | 187 | 0.1 | 14 | 0.1 | 29 | 0.1 | 903 | 0.4 |
| Engineering nec | 14,110 | 2.0 | 697 | 1.3 | 28 | 1.3 | 931 | 1.9 | 776 | 2.0 | 15 | 2.0 | 5,408 | 2.0 | 260 | 1.7 | 344 | 1.4 | 5,651 | 2.4 |
| Health | 72,422 | 10.5 | 7,631 | 14.0 | 309 | 14.9 | 5,972 | 12.2 | 7,378 | 19.4 | 107 | 14.4 | 37,248 | 13.7 | 1,938 | 12.4 | 3,571 | 14.8 | 8,268 | 3.5 |
| Clinical medicine[a] | 30,822 | 4.5 | 3,433 | 6.3 | 177 | 8.5 | 3,119 | 6.4 | 4,393 | 11.5 | 56 | 7.5 | 13,614 | 5.0 | 971 | 6.2 | 1,793 | 7.4 | 3,266 | 1.4 |
| Public health | 29,594 | 4.3 | 3,343 | 6.1 | 173 | 8.3 | 2,941 | 6.0 | 4,325 | 11.4 | 55 | 7.4 | 13,042 | 4.8 | 939 | 6.0 | 1,728 | 7.2 | 3,048 | 1.3 |
| Clinical medicine nec | 1,228 | 0.2 | 90 | 0.2 | 4 | 0.2 | 178 | 0.4 | 68 | 0.2 | 1 | 0.1 | 572 | 0.2 | 32 | 0.2 | 65 | 0.3 | 218 | 0.1 |
| Other health | 41,600 | 6.0 | 4,198 | 7.7 | 132 | 6.4 | 2,853 | 5.8 | 2,985 | 7.8 | 51 | 6.9 | 23,634 | 8.7 | 967 | 6.2 | 1,778 | 7.4 | 5,002 | 2.1 |
| Communication disorders sciences | 17,257 | 2.5 | 2,136 | 3.9 | 60 | 2.9 | 825 | 1.7 | 753 | 2.0 | 19 | 2.6 | 11,954 | 4.4 | 422 | 2.7 | 738 | 3.1 | 350 | 0.1 |
| Dental sciences | 1,523 | 0.2 | 81 | 0.1 | 2 | 0.1 | 198 | 0.4 | 43 | 0.1 | 2 | 0.3 | 579 | 0.2 | 25 | 0.2 | 85 | 0.4 | 508 | 0.2 |
| Nursing science | 5,300 | 0.8 | 385 | 0.7 | 22 | 1.1 | 320 | 0.7 | 701 | 1.8 | 7 | 0.9 | 3,099 | 1.1 | 89 | 0.6 | 277 | 1.1 | 400 | 0.2 |
| Pharmaceutical sciences | 4,308 | 0.6 | 229 | 0.4 | 6 | 0.3 | 495 | 1.0 | 172 | 0.5 | 2 | 0.3 | 1,172 | 0.4 | 81 | 0.5 | 89 | 0.4 | 2,062 | 0.9 |
| Veterinary biomedical and clinical sciences | 1,573 | 0.2 | 91 | 0.2 | 4 | 0.2 | 66 | 0.1 | 46 | 0.1 | 1 | 0.1 | 846 | 0.3 | 43 | 0.3 | 120 | 0.5 | 356 | 0.2 |
| Other health nec | 11,639 | 1.7 | 1,276 | 2.3 | 38 | 1.8 | 949 | 1.9 | 1,270 | 3.3 | 20 | 2.7 | 5,984 | 2.2 | 307 | 2.0 | 469 | 1.9 | 1,326 | 0.6 |

* = value < 0.05%.

nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec.

**Note(s):**

Percentages may not add to total because of rounding. Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-4b

## Citizenship, ethnicity, and race of master's students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All detailed fields | 408,228 | 100.0 | 36,777 | 100.0 | 1,327 | 100.0 | 31,301 | 100.0 | 27,598 | 100.0 | 542 | 100.0 | 163,836 | 100.0 | 9,593 | 100.0 | 16,396 | 100.0 | 120,858 | 100.0 |
| Science | 259,795 | 63.6 | 24,330 | 66.2 | 902 | 68.0 | 19,529 | 62.4 | 18,996 | 68.8 | 382 | 70.5 | 103,762 | 63.3 | 6,339 | 66.1 | 11,138 | 67.9 | 74,417 | 61.6 |
| Agricultural sciences | 5,629 | 1.4 | 470 | 1.3 | 23 | 1.7 | 160 | 0.5 | 227 | 0.8 | 14 | 2.6 | 3,425 | 2.1 | 134 | 1.4 | 123 | 0.8 | 1,053 | 0.9 |
| Biological and biomedical sciences | 38,078 | 9.3 | 3,817 | 10.4 | 120 | 9.0 | 4,197 | 13.4 | 3,210 | 11.6 | 92 | 17.0 | 18,281 | 11.2 | 1,193 | 12.4 | 2,018 | 12.3 | 5,150 | 4.3 |
| Biochemistry | 808 | 0.2 | 93 | 0.3 | 1 | 0.1 | 91 | 0.3 | 42 | 0.2 | 2 | 0.4 | 352 | 0.2 | 18 | 0.2 | 32 | 0.2 | 177 | 0.1 |
| Biology | 8,635 | 2.1 | 1,087 | 3.0 | 42 | 3.2 | 554 | 1.8 | 629 | 2.3 | 19 | 3.5 | 5,032 | 3.1 | 279 | 2.9 | 292 | 1.8 | 701 | 0.6 |
| Biomedical sciences | 5,241 | 1.3 | 548 | 1.5 | 17 | 1.3 | 961 | 3.1 | 792 | 2.9 | 32 | 5.9 | 1,951 | 1.2 | 185 | 1.9 | 462 | 2.8 | 293 | 0.2 |
| Biophysics | 7 | * | 1 | * | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 5 | * | 0 | 0.0 | 1 | * | 0 | 0.0 |
| Biostatistics and bioinformatics | 3,036 | 0.7 | 150 | 0.4 | 6 | 0.5 | 384 | 1.2 | 100 | 0.4 | 2 | 0.4 | 900 | 0.5 | 69 | 0.7 | 115 | 0.7 | 1,310 | 1.1 |
| Biotechnology | 3,157 | 0.8 | 299 | 0.8 | 2 | 0.2 | 435 | 1.4 | 333 | 1.2 | 5 | 0.9 | 1,127 | 0.7 | 99 | 1.0 | 181 | 1.1 | 676 | 0.6 |
| Botany and plant biology | 392 | 0.1 | 31 | 0.1 | 0 | 0.0 | 14 | * | 8 | * | 3 | 0.6 | 222 | 0.1 | 19 | 0.2 | 14 | 0.1 | 81 | 0.1 |
| Cell, cellular biology, and anatomical sciences | 927 | 0.2 | 99 | 0.3 | 3 | 0.2 | 117 | 0.4 | 47 | 0.2 | 2 | 0.4 | 439 | 0.3 | 30 | 0.3 | 48 | 0.3 | 142 | 0.1 |
| Ecology and population biology | 939 | 0.2 | 65 | 0.2 | 5 | 0.4 | 29 | 0.1 | 25 | 0.1 | 3 | 0.6 | 710 | 0.4 | 27 | 0.3 | 31 | 0.2 | 44 | * |
| Epidemiology | 2,776 | 0.7 | 281 | 0.8 | 5 | 0.4 | 394 | 1.3 | 197 | 0.7 | 0 | 0.0 | 1,085 | 0.7 | 110 | 1.1 | 125 | 0.8 | 579 | 0.5 |
| Genetics | 581 | 0.1 | 36 | 0.1 | 0 | 0.0 | 59 | 0.2 | 17 | 0.1 | 1 | 0.2 | 363 | 0.2 | 19 | 0.2 | 27 | 0.2 | 59 | * |
| Microbiological sciences and immunology | 1,370 | 0.3 | 184 | 0.5 | 8 | 0.6 | 97 | 0.3 | 97 | 0.4 | 0 | 0.0 | 685 | 0.4 | 48 | 0.5 | 108 | 0.7 | 143 | 0.1 |
| Molecular biology | 378 | 0.1 | 49 | 0.1 | 2 | 0.2 | 36 | 0.1 | 37 | 0.1 | 0 | 0.0 | 179 | 0.1 | 11 | 0.1 | 18 | 0.1 | 46 | * |
| Neurobiology and neuroscience | 362 | 0.1 | 54 | 0.1 | 1 | 0.1 | 37 | 0.1 | 28 | 0.1 | 0 | 0.0 | 171 | 0.1 | 5 | 0.1 | 8 | * | 58 | * |
| Nutrition science | 2,385 | 0.6 | 203 | 0.6 | 4 | 0.3 | 163 | 0.5 | 75 | 0.3 | 6 | 1.1 | 1,564 | 1.0 | 71 | 0.7 | 103 | 0.6 | 196 | 0.2 |
| Pathology and experimental pathology | 87 | * | 5 | * | 0 | 0.0 | 3 | * | 3 | * | 1 | 0.2 | 51 | * | 5 | 0.1 | 2 | * | 17 | * |
| Pharmacology and toxicology | 923 | 0.2 | 54 | 0.1 | 3 | 0.2 | 105 | 0.3 | 61 | 0.2 | 1 | 0.2 | 402 | 0.2 | 25 | 0.3 | 43 | 0.3 | 229 | 0.2 |
| Physiology | 2,594 | 0.6 | 192 | 0.5 | 9 | 0.7 | 304 | 1.0 | 289 | 1.0 | 2 | 0.4 | 1,369 | 0.8 | 83 | 0.9 | 157 | 1.0 | 189 | 0.2 |
| Zoology and animal biology | 891 | 0.2 | 69 | 0.2 | 3 | 0.2 | 23 | 0.1 | 29 | 0.1 | 0 | 0.0 | 610 | 0.4 | 27 | 0.3 | 49 | 0.3 | 81 | 0.1 |
| Biological and biomedical sciences nec | 2,589 | 0.6 | 317 | 0.9 | 9 | 0.7 | 391 | 1.2 | 401 | 1.5 | 13 | 2.4 | 1,064 | 0.6 | 63 | 0.7 | 202 | 1.2 | 129 | 0.1 |
| Computer and information sciences | 84,092 | 20.6 | 3,777 | 10.3 | 108 | 8.1 | 8,274 | 26.4 | 4,803 | 17.4 | 58 | 10.7 | 19,908 | 12.2 | 1,347 | 14.0 | 2,494 | 15.2 | 43,323 | 35.8 |
| Computer science | 24,628 | 6.0 | 616 | 1.7 | 14 | 1.1 | 2,104 | 6.7 | 469 | 1.7 | 5 | 0.9 | 3,536 | 2.2 | 288 | 3.0 | 651 | 4.0 | 16,945 | 14.0 |
| Computer and information sciences, general | 33,698 | 8.3 | 1,531 | 4.2 | 50 | 3.8 | 3,772 | 12.1 | 1,446 | 5.2 | 22 | 4.1 | 8,663 | 5.3 | 528 | 5.5 | 647 | 3.9 | 17,039 | 14.1 |
| Computer and information sciences nec | 25,766 | 6.3 | 1,630 | 4.4 | 44 | 3.3 | 2,398 | 7.7 | 2,888 | 10.5 | 31 | 5.7 | 7,709 | 4.7 | 531 | 5.5 | 1,196 | 7.3 | 9,339 | 7.7 |
| Geosciences, atmospheric sciences, and ocean sciences | 5,327 | 1.3 | 472 | 1.3 | 22 | 1.7 | 133 | 0.4 | 152 | 0.6 | 7 | 1.3 | 3,722 | 2.3 | 154 | 1.6 | 179 | 1.1 | 486 | 0.4 |
| Atmospheric sciences and meteorology | 473 | 0.1 | 26 | 0.1 | 0 | 0.0 | 7 | * | 18 | 0.1 | 0 | 0.0 | 326 | 0.2 | 11 | 0.1 | 14 | 0.1 | 71 | 0.1 |
| Geological and earth sciences | 3,610 | 0.9 | 314 | 0.9 | 21 | 1.6 | 90 | 0.3 | 106 | 0.4 | 6 | 1.1 | 2,534 | 1.5 | 101 | 1.1 | 102 | 0.6 | 336 | 0.3 |
| Ocean and marine sciences | 1,244 | 0.3 | 132 | 0.4 | 1 | 0.1 | 36 | 0.1 | 28 | 0.1 | 1 | 0.2 | 862 | 0.5 | 42 | 0.4 | 63 | 0.4 | 79 | 0.1 |
| Mathematics and statistics | 19,594 | 4.8 | 1,123 | 3.1 | 42 | 3.2 | 1,619 | 5.2 | 519 | 1.9 | 5 | 0.9 | 5,425 | 3.3 | 256 | 2.7 | 650 | 4.0 | 9,955 | 8.2 |
| Mathematics and applied mathematics | 11,933 | 2.9 | 778 | 2.1 | 18 | 1.4 | 781 | 2.5 | 348 | 1.3 | 1 | 0.2 | 3,411 | 2.1 | 162 | 1.7 | 444 | 2.7 | 5,990 | 5.0 |

TABLE 4-4b

## Citizenship, ethnicity, and race of master's students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Statistics | 7,661 | 1.9 | 345 | 0.9 | 24 | 1.8 | 838 | 2.7 | 171 | 0.6 | 4 | 0.7 | 2,014 | 1.2 | 94 | 1.0 | 206 | 1.3 | 3,965 | 3.3 |
| Multidisciplinary and interdisciplinary studies | 8,203 | 2.0 | 734 | 2.0 | 21 | 1.6 | 686 | 2.2 | 619 | 2.2 | 13 | 2.4 | 3,450 | 2.1 | 231 | 2.4 | 261 | 1.6 | 2,188 | 1.8 |
| Natural resources and conservation | 8,066 | 2.0 | 691 | 1.9 | 86 | 6.5 | 230 | 0.7 | 216 | 0.8 | 21 | 3.9 | 5,442 | 3.3 | 273 | 2.8 | 291 | 1.8 | 816 | 0.7 |
| Environmental science and studies | 3,883 | 1.0 | 406 | 1.1 | 37 | 2.8 | 136 | 0.4 | 102 | 0.4 | 14 | 2.6 | 2,462 | 1.5 | 122 | 1.3 | 153 | 0.9 | 451 | 0.4 |
| Forestry, natural resources, and conservation | 4,183 | 1.0 | 285 | 0.8 | 49 | 3.7 | 94 | 0.3 | 114 | 0.4 | 7 | 1.3 | 2,980 | 1.8 | 151 | 1.6 | 138 | 0.8 | 365 | 0.3 |
| Physical sciences | 6,361 | 1.6 | 698 | 1.9 | 26 | 2.0 | 439 | 1.4 | 335 | 1.2 | 6 | 1.1 | 2,799 | 1.7 | 165 | 1.7 | 190 | 1.2 | 1,703 | 1.4 |
| Astronomy and astrophysics | 77 | * | 8 | * | 0 | 0.0 | 9 | * | 4 | * | 0 | 0.0 | 40 | * | 6 | 0.1 | 4 | * | 6 | * |
| Chemistry | 3,152 | 0.8 | 366 | 1.0 | 15 | 1.1 | 265 | 0.8 | 216 | 0.8 | 2 | 0.4 | 1,383 | 0.8 | 71 | 0.7 | 85 | 0.5 | 749 | 0.6 |
| Materials sciences | 539 | 0.1 | 36 | 0.1 | 0 | 0.0 | 36 | 0.1 | 12 | * | 0 | 0.0 | 145 | 0.1 | 3 | * | 12 | 0.1 | 295 | 0.2 |
| Physics | 2,164 | 0.5 | 242 | 0.7 | 8 | 0.6 | 115 | 0.4 | 86 | 0.3 | 4 | 0.7 | 957 | 0.6 | 64 | 0.7 | 72 | 0.4 | 616 | 0.5 |
| Physical sciences nec | 429 | 0.1 | 46 | 0.1 | 3 | 0.2 | 14 | * | 17 | 0.1 | 0 | 0.0 | 274 | 0.2 | 21 | 0.2 | 17 | 0.1 | 37 | * |
| Psychology | 40,838 | 10.0 | 7,361 | 20.0 | 181 | 13.6 | 1,795 | 5.7 | 4,709 | 17.1 | 87 | 16.1 | 20,798 | 12.7 | 1,336 | 13.9 | 2,963 | 18.1 | 1,608 | 1.3 |
| Clinical psychology | 3,587 | 0.9 | 658 | 1.8 | 10 | 0.8 | 219 | 0.7 | 268 | 1.0 | 14 | 2.6 | 1,781 | 1.1 | 142 | 1.5 | 265 | 1.6 | 230 | 0.2 |
| Counseling and applied psychology | 29,322 | 7.2 | 5,472 | 14.9 | 127 | 9.6 | 1,183 | 3.8 | 3,571 | 12.9 | 58 | 10.7 | 14,785 | 9.0 | 920 | 9.6 | 2,434 | 14.8 | 772 | 0.6 |
| Psychology, general | 6,357 | 1.6 | 1,003 | 2.7 | 38 | 2.9 | 291 | 0.9 | 733 | 2.7 | 13 | 2.4 | 3,519 | 2.1 | 219 | 2.3 | 226 | 1.4 | 315 | 0.3 |
| Research and experimental psychology | 1,572 | 0.4 | 228 | 0.6 | 6 | 0.5 | 102 | 0.3 | 137 | 0.5 | 2 | 0.4 | 713 | 0.4 | 55 | 0.6 | 38 | 0.2 | 291 | 0.2 |
| Social sciences | 43,607 | 10.7 | 5,187 | 14.1 | 273 | 20.6 | 1,996 | 6.4 | 4,206 | 15.2 | 79 | 14.6 | 20,512 | 12.5 | 1,250 | 13.0 | 1,969 | 12.0 | 8,135 | 6.7 |
| Agricultural economics | 700 | 0.2 | 36 | 0.1 | 1 | 0.1 | 9 | * | 8 | * | 0 | 0.0 | 343 | 0.2 | 7 | 0.1 | 13 | 0.1 | 283 | 0.2 |
| Anthropology | 2,233 | 0.5 | 282 | 0.8 | 32 | 2.4 | 74 | 0.2 | 72 | 0.3 | 1 | 0.2 | 1,466 | 0.9 | 99 | 1.0 | 98 | 0.6 | 109 | 0.1 |
| Criminal justice and safety studies | 4,917 | 1.2 | 758 | 2.1 | 23 | 1.7 | 92 | 0.3 | 1,157 | 4.2 | 15 | 2.8 | 2,308 | 1.4 | 141 | 1.5 | 349 | 2.1 | 74 | 0.1 |
| Economics (except agricultural) | 6,084 | 1.5 | 337 | 0.9 | 8 | 0.6 | 313 | 1.0 | 209 | 0.8 | 5 | 0.9 | 1,669 | 1.0 | 83 | 0.9 | 150 | 0.9 | 3,310 | 2.7 |
| Geography and cartography | 2,660 | 0.7 | 227 | 0.6 | 20 | 1.5 | 95 | 0.3 | 116 | 0.4 | 3 | 0.6 | 1,651 | 1.0 | 89 | 0.9 | 88 | 0.5 | 371 | 0.3 |
| History and philosophy of science | 32 | * | 0 | 0.0 | 0 | 0.0 | 3 | * | 7 | * | 0 | 0.0 | 18 | * | 0 | 0.0 | 2 | * | 2 | * |
| Human development | 1,339 | 0.3 | 183 | 0.5 | 3 | 0.2 | 55 | 0.2 | 136 | 0.5 | 3 | 0.6 | 804 | 0.5 | 35 | 0.4 | 45 | 0.3 | 75 | 0.1 |
| International relations and national security studies | 6,657 | 1.6 | 780 | 2.1 | 15 | 1.1 | 350 | 1.1 | 493 | 1.8 | 7 | 1.3 | 3,346 | 2.0 | 181 | 1.9 | 454 | 2.8 | 1,031 | 0.9 |
| Linguistics | 1,153 | 0.3 | 161 | 0.4 | 20 | 1.5 | 71 | 0.2 | 37 | 0.1 | 1 | 0.2 | 590 | 0.4 | 42 | 0.4 | 45 | 0.3 | 186 | 0.2 |
| Political science and government | 2,897 | 0.7 | 416 | 1.1 | 9 | 0.7 | 112 | 0.4 | 281 | 1.0 | 4 | 0.7 | 1,554 | 0.9 | 81 | 0.8 | 121 | 0.7 | 319 | 0.3 |
| Public policy analysis | 6,297 | 1.5 | 606 | 1.6 | 19 | 1.4 | 447 | 1.4 | 513 | 1.9 | 12 | 2.2 | 3,000 | 1.8 | 190 | 2.0 | 270 | 1.6 | 1,240 | 1.0 |
| Sociology | 2,263 | 0.6 | 444 | 1.2 | 11 | 0.8 | 77 | 0.2 | 367 | 1.3 | 4 | 0.7 | 1,061 | 0.6 | 76 | 0.8 | 47 | 0.3 | 176 | 0.1 |
| Social sciences nec | 6,375 | 1.6 | 957 | 2.6 | 112 | 8.4 | 298 | 1.0 | 810 | 2.9 | 24 | 4.4 | 2,702 | 1.6 | 226 | 2.4 | 287 | 1.8 | 959 | 0.8 |
| Engineering | 91,939 | 22.5 | 5,846 | 15.9 | 168 | 12.7 | 7,009 | 22.4 | 2,708 | 9.8 | 69 | 12.7 | 30,121 | 18.4 | 1,672 | 17.4 | 2,280 | 13.9 | 42,066 | 34.8 |
| Aerospace, aeronautical, and astronautical engineering | 3,701 | 0.9 | 299 | 0.8 | 10 | 0.8 | 311 | 1.0 | 75 | 0.3 | 8 | 1.5 | 2,076 | 1.3 | 132 | 1.4 | 91 | 0.6 | 699 | 0.6 |
| Agricultural engineering | 494 | 0.1 | 15 | * | 1 | 0.1 | 24 | 0.1 | 10 | * | 0 | 0.0 | 247 | 0.2 | 12 | 0.1 | 5 | * | 180 | 0.1 |
| Bioengineering and biomedical engineering | 4,335 | 1.1 | 313 | 0.9 | 8 | 0.6 | 613 | 2.0 | 168 | 0.6 | 6 | 1.1 | 1,518 | 0.9 | 116 | 1.2 | 128 | 0.8 | 1,465 | 1.2 |

TABLE 4-4b

## Citizenship, ethnicity, and race of master's students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Biological and biosystems engineering | 89 | * | 3 | * | 0 | 0.0 | 8 | * | 0 | 0.0 | 0 | 0.0 | 45 | * | 1 | * | 6 | * | 26 | * |
| Chemical engineering | 2,632 | 0.6 | 131 | 0.4 | 2 | 0.2 | 248 | 0.8 | 83 | 0.3 | 0 | 0.0 | 749 | 0.5 | 48 | 0.5 | 53 | 0.3 | 1,318 | 1.1 |
| Civil engineering | 11,873 | 2.9 | 1,014 | 2.8 | 37 | 2.8 | 814 | 2.6 | 315 | 1.1 | 7 | 1.3 | 4,404 | 2.7 | 236 | 2.5 | 298 | 1.8 | 4,748 | 3.9 |
| Electrical, electronics, and communications engineering | 28,177 | 6.9 | 1,360 | 3.7 | 34 | 2.6 | 2,229 | 7.1 | 606 | 2.2 | 11 | 2.0 | 6,031 | 3.7 | 362 | 3.8 | 610 | 3.7 | 16,934 | 14.0 |
| Engineering mechanics, physics, and science | 852 | 0.2 | 32 | 0.1 | 3 | 0.2 | 61 | 0.2 | 22 | 0.1 | 2 | 0.4 | 398 | 0.2 | 16 | 0.2 | 30 | 0.2 | 288 | 0.2 |
| Industrial and manufacturing engineering | 11,912 | 2.9 | 895 | 2.4 | 21 | 1.6 | 687 | 2.2 | 491 | 1.8 | 12 | 2.2 | 3,624 | 2.2 | 167 | 1.7 | 369 | 2.3 | 5,646 | 4.7 |
| Mechanical engineering | 14,861 | 3.6 | 1,035 | 2.8 | 25 | 1.9 | 1,088 | 3.5 | 274 | 1.0 | 9 | 1.7 | 5,639 | 3.4 | 320 | 3.3 | 349 | 2.1 | 6,122 | 5.1 |
| Metallurgical and materials engineering | 1,974 | 0.5 | 122 | 0.3 | 0 | 0.0 | 144 | 0.5 | 39 | 0.1 | 0 | 0.0 | 657 | 0.4 | 43 | 0.4 | 44 | 0.3 | 925 | 0.8 |
| Mining engineering | 292 | 0.1 | 13 | * | 2 | 0.2 | 4 | * | 9 | * | 1 | 0.2 | 162 | 0.1 | 8 | 0.1 | 7 | * | 86 | 0.1 |
| Nanotechnology | 49 | * | 9 | * | 0 | 0.0 | 5 | * | 6 | * | 0 | 0.0 | 19 | * | 3 | * | 1 | * | 6 | * |
| Nuclear engineering | 418 | 0.1 | 40 | 0.1 | 1 | 0.1 | 19 | 0.1 | 6 | * | 0 | 0.0 | 242 | 0.1 | 4 | * | 7 | * | 99 | 0.1 |
| Petroleum engineering | 642 | 0.2 | 33 | 0.1 | 2 | 0.2 | 32 | 0.1 | 17 | 0.1 | 0 | 0.0 | 131 | 0.1 | 9 | 0.1 | 14 | 0.1 | 404 | 0.3 |
| Engineering nec | 9,638 | 2.4 | 532 | 1.4 | 22 | 1.7 | 722 | 2.3 | 587 | 2.1 | 13 | 2.4 | 4,179 | 2.6 | 195 | 2.0 | 268 | 1.6 | 3,120 | 2.6 |
| Health | 56,494 | 13.8 | 6,601 | 17.9 | 257 | 19.4 | 4,763 | 15.2 | 5,894 | 21.4 | 91 | 16.8 | 29,953 | 18.3 | 1,582 | 16.5 | 2,978 | 18.2 | 4,375 | 3.6 |
| Clinical medicine[a] | 26,251 | 6.4 | 3,004 | 8.2 | 156 | 11.8 | 2,743 | 8.8 | 3,799 | 13.8 | 46 | 8.5 | 11,703 | 7.1 | 842 | 8.8 | 1,639 | 10.0 | 2,319 | 1.9 |
| Public health | 25,403 | 6.2 | 2,950 | 8.0 | 154 | 11.6 | 2,596 | 8.3 | 3,750 | 13.6 | 46 | 8.5 | 11,327 | 6.9 | 822 | 8.6 | 1,582 | 9.6 | 2,176 | 1.8 |
| Clinical medicine nec | 848 | 0.2 | 54 | 0.1 | 2 | 0.2 | 147 | 0.5 | 49 | 0.2 | 0 | 0.0 | 376 | 0.2 | 20 | 0.2 | 57 | 0.3 | 143 | 0.1 |
| Other health | 30,243 | 7.4 | 3,597 | 9.8 | 101 | 7.6 | 2,020 | 6.5 | 2,095 | 7.6 | 45 | 8.3 | 18,250 | 11.1 | 740 | 7.7 | 1,339 | 8.2 | 2,056 | 1.7 |
| Communication disorders sciences | 16,346 | 4.0 | 2,072 | 5.6 | 59 | 4.4 | 781 | 2.5 | 704 | 2.6 | 19 | 3.5 | 11,405 | 7.0 | 402 | 4.2 | 706 | 4.3 | 198 | 0.2 |
| Dental sciences | 1,315 | 0.3 | 77 | 0.2 | 2 | 0.2 | 183 | 0.6 | 39 | 0.1 | 2 | 0.4 | 538 | 0.3 | 21 | 0.2 | 79 | 0.5 | 374 | 0.3 |
| Nursing science | 1,861 | 0.5 | 195 | 0.5 | 5 | 0.4 | 125 | 0.4 | 202 | 0.7 | 4 | 0.7 | 1,157 | 0.7 | 30 | 0.3 | 130 | 0.8 | 13 | * |
| Pharmaceutical sciences | 1,187 | 0.3 | 78 | 0.2 | 1 | 0.1 | 132 | 0.4 | 49 | 0.2 | 1 | 0.2 | 321 | 0.2 | 18 | 0.2 | 21 | 0.1 | 566 | 0.5 |
| Veterinary biomedical and clinical sciences | 881 | 0.2 | 64 | 0.2 | 4 | 0.3 | 39 | 0.1 | 31 | 0.1 | 1 | 0.2 | 517 | 0.3 | 23 | 0.2 | 41 | 0.3 | 161 | 0.1 |
| Other health nec | 8,653 | 2.1 | 1,111 | 3.0 | 30 | 2.3 | 760 | 2.4 | 1,070 | 3.9 | 18 | 3.3 | 4,312 | 2.6 | 246 | 2.6 | 362 | 2.2 | 744 | 0.6 |

* = value < 0.05%.

nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec.

**Note(s):**

Percentages may not add to total because of rounding. Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-4c

## Citizenship, ethnicity, and race of doctoral students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All detailed fields | 281,889 | 100.0 | 17,690 | 100.0 | 750 | 100.0 | 17,543 | 100.0 | 10,450 | 100.0 | 202 | 100.0 | 108,709 | 100.0 | 6,020 | 100.0 | 7,770 | 100.0 | 112,755 | 100.0 |
| Science | 193,896 | 68.8 | 13,863 | 78.4 | 624 | 83.2 | 11,953 | 68.1 | 7,454 | 71.3 | 160 | 79.2 | 82,643 | 76.0 | 4,563 | 75.8 | 5,730 | 73.7 | 66,906 | 59.3 |
| Agricultural sciences | 3,889 | 1.4 | 166 | 0.9 | 10 | 1.3 | 107 | 0.6 | 102 | 1.0 | 2 | 1.0 | 1,578 | 1.5 | 52 | 0.9 | 58 | 0.7 | 1,814 | 1.6 |
| Biological and biomedical sciences | 53,915 | 19.1 | 4,633 | 26.2 | 156 | 20.8 | 4,622 | 26.3 | 2,060 | 19.7 | 55 | 27.2 | 25,540 | 23.5 | 1,437 | 23.9 | 1,662 | 21.4 | 13,750 | 12.2 |
| Biochemistry | 4,534 | 1.6 | 423 | 2.4 | 9 | 1.2 | 365 | 2.1 | 147 | 1.4 | 5 | 2.5 | 2,058 | 1.9 | 135 | 2.2 | 86 | 1.1 | 1,306 | 1.2 |
| Biology | 7,166 | 2.5 | 603 | 3.4 | 19 | 2.5 | 440 | 2.5 | 226 | 2.2 | 1 | 0.5 | 3,499 | 3.2 | 176 | 2.9 | 187 | 2.4 | 2,015 | 1.8 |
| Biomedical sciences | 4,579 | 1.6 | 404 | 2.3 | 13 | 1.7 | 419 | 2.4 | 241 | 2.3 | 7 | 3.5 | 2,122 | 2.0 | 135 | 2.2 | 124 | 1.6 | 1,114 | 1.0 |
| Biophysics | 890 | 0.3 | 70 | 0.4 | 1 | 0.1 | 93 | 0.5 | 19 | 0.2 | 0 | 0.0 | 363 | 0.3 | 18 | 0.3 | 36 | 0.5 | 290 | 0.3 |
| Biostatistics and bioinformatics | 3,192 | 1.1 | 117 | 0.7 | 1 | 0.1 | 376 | 2.1 | 73 | 0.7 | 3 | 1.5 | 1,029 | 0.9 | 70 | 1.2 | 117 | 1.5 | 1,406 | 1.2 |
| Biotechnology | 98 | * | 8 | * | 0 | 0.0 | 12 | 0.1 | 3 | * | 0 | 0.0 | 50 | * | 2 | * | 1 | * | 22 | * |
| Botany and plant biology | 1,295 | 0.5 | 105 | 0.6 | 4 | 0.5 | 62 | 0.4 | 29 | 0.3 | 1 | 0.5 | 579 | 0.5 | 29 | 0.5 | 38 | 0.5 | 448 | 0.4 |
| Cell, cellular biology, and anatomical sciences | 4,975 | 1.8 | 516 | 2.9 | 14 | 1.9 | 481 | 2.7 | 157 | 1.5 | 5 | 2.5 | 2,289 | 2.1 | 139 | 2.3 | 151 | 1.9 | 1,223 | 1.1 |
| Ecology and population biology | 2,571 | 0.9 | 221 | 1.2 | 6 | 0.8 | 92 | 0.5 | 70 | 0.7 | 4 | 2.0 | 1,550 | 1.4 | 73 | 1.2 | 98 | 1.3 | 457 | 0.4 |
| Epidemiology | 1,916 | 0.7 | 118 | 0.7 | 8 | 1.1 | 218 | 1.2 | 125 | 1.2 | 5 | 2.5 | 789 | 0.7 | 54 | 0.9 | 69 | 0.9 | 530 | 0.5 |
| Genetics | 2,082 | 0.7 | 177 | 1.0 | 11 | 1.5 | 181 | 1.0 | 66 | 0.6 | 2 | 1.0 | 1,069 | 1.0 | 50 | 0.8 | 50 | 0.6 | 476 | 0.4 |
| Microbiological sciences and immunology | 3,937 | 1.4 | 369 | 2.1 | 13 | 1.7 | 361 | 2.1 | 160 | 1.5 | 3 | 1.5 | 2,094 | 1.9 | 113 | 1.9 | 111 | 1.4 | 713 | 0.6 |
| Molecular biology | 1,153 | 0.4 | 116 | 0.7 | 2 | 0.3 | 131 | 0.7 | 39 | 0.4 | 0 | 0.0 | 486 | 0.4 | 35 | 0.6 | 40 | 0.5 | 304 | 0.3 |
| Neurobiology and neuroscience | 5,138 | 1.8 | 526 | 3.0 | 18 | 2.4 | 520 | 3.0 | 204 | 2.0 | 1 | 0.5 | 2,661 | 2.4 | 168 | 2.8 | 182 | 2.3 | 858 | 0.8 |
| Nutrition science | 948 | 0.3 | 57 | 0.3 | 2 | 0.3 | 58 | 0.3 | 33 | 0.3 | 0 | 0.0 | 444 | 0.4 | 22 | 0.4 | 13 | 0.2 | 319 | 0.3 |
| Pathology and experimental pathology | 843 | 0.3 | 113 | 0.6 | 3 | 0.4 | 68 | 0.4 | 32 | 0.3 | 1 | 0.5 | 345 | 0.3 | 18 | 0.3 | 58 | 0.7 | 205 | 0.2 |
| Pharmacology and toxicology | 2,151 | 0.8 | 197 | 1.1 | 5 | 0.7 | 233 | 1.3 | 150 | 1.4 | 3 | 1.5 | 936 | 0.9 | 71 | 1.2 | 77 | 1.0 | 479 | 0.4 |
| Physiology | 2,703 | 1.0 | 207 | 1.2 | 10 | 1.3 | 246 | 1.4 | 108 | 1.0 | 6 | 3.0 | 1,270 | 1.2 | 54 | 0.9 | 84 | 1.1 | 718 | 0.6 |
| Zoology and animal biology | 1,198 | 0.4 | 72 | 0.4 | 3 | 0.4 | 32 | 0.2 | 30 | 0.3 | 1 | 0.5 | 715 | 0.7 | 32 | 0.5 | 41 | 0.5 | 272 | 0.2 |
| Biological and biomedical sciences nec | 2,546 | 0.9 | 214 | 1.2 | 14 | 1.9 | 234 | 1.3 | 148 | 1.4 | 7 | 3.5 | 1,192 | 1.1 | 43 | 0.7 | 99 | 1.3 | 595 | 0.5 |
| Computer and information sciences | 17,192 | 6.1 | 426 | 2.4 | 11 | 1.5 | 1,069 | 6.1 | 444 | 4.2 | 11 | 5.4 | 3,712 | 3.4 | 240 | 4.0 | 427 | 5.5 | 10,852 | 9.6 |
| Computer science | 8,646 | 3.1 | 186 | 1.1 | 3 | 0.4 | 563 | 3.2 | 132 | 1.3 | 4 | 2.0 | 1,728 | 1.6 | 118 | 2.0 | 250 | 3.2 | 5,662 | 5.0 |
| Computer and information sciences, general | 6,952 | 2.5 | 163 | 0.9 | 5 | 0.7 | 389 | 2.2 | 170 | 1.6 | 3 | 1.5 | 1,474 | 1.4 | 92 | 1.5 | 139 | 1.8 | 4,517 | 4.0 |
| Computer and information sciences nec | 1,594 | 0.6 | 77 | 0.4 | 3 | 0.4 | 117 | 0.7 | 142 | 1.4 | 4 | 2.0 | 510 | 0.5 | 30 | 0.5 | 38 | 0.5 | 673 | 0.6 |
| Geosciences, atmospheric sciences, and ocean sciences | 6,551 | 2.3 | 410 | 2.3 | 17 | 2.3 | 244 | 1.4 | 106 | 1.0 | 2 | 1.0 | 3,358 | 3.1 | 166 | 2.8 | 182 | 2.3 | 2,066 | 1.8 |
| Atmospheric sciences and meteorology | 866 | 0.3 | 37 | 0.2 | 1 | 0.1 | 21 | 0.1 | 13 | 0.1 | 0 | 0.0 | 435 | 0.4 | 15 | 0.2 | 25 | 0.3 | 319 | 0.3 |
| Geological and earth sciences | 4,239 | 1.5 | 279 | 1.6 | 13 | 1.7 | 160 | 0.9 | 75 | 0.7 | 1 | 0.5 | 2,077 | 1.9 | 102 | 1.7 | 111 | 1.4 | 1,421 | 1.3 |
| Ocean and marine sciences | 1,446 | 0.5 | 94 | 0.5 | 3 | 0.4 | 63 | 0.4 | 18 | 0.2 | 1 | 0.5 | 846 | 0.8 | 49 | 0.8 | 46 | 0.6 | 326 | 0.3 |
| Mathematics and statistics | 13,565 | 4.8 | 556 | 3.1 | 15 | 2.0 | 772 | 4.4 | 197 | 1.9 | 2 | 1.0 | 4,488 | 4.1 | 230 | 3.8 | 351 | 4.5 | 6,954 | 6.2 |
| Mathematics and applied mathematics | 10,308 | 3.7 | 490 | 2.8 | 12 | 1.6 | 585 | 3.3 | 155 | 1.5 | 1 | 0.5 | 3,835 | 3.5 | 194 | 3.2 | 287 | 3.7 | 4,749 | 4.2 |

TABLE 4-4c

## Citizenship, ethnicity, and race of doctoral students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Statistics | 3,257 | 1.2 | 66 | 0.4 | 3 | 0.4 | 187 | 1.1 | 42 | 0.4 | 1 | 0.5 | 653 | 0.6 | 36 | 0.6 | 64 | 0.8 | 2,205 | 2.0 |
| Multidisciplinary and interdisciplinary studies | 2,978 | 1.1 | 201 | 1.1 | 15 | 2.0 | 194 | 1.1 | 169 | 1.6 | 7 | 3.5 | 1,357 | 1.2 | 61 | 1.0 | 95 | 1.2 | 879 | 0.8 |
| Natural resources and conservation | 3,677 | 1.3 | 298 | 1.7 | 36 | 4.8 | 128 | 0.7 | 148 | 1.4 | 2 | 1.0 | 1,946 | 1.8 | 82 | 1.4 | 150 | 1.9 | 887 | 0.8 |
| Environmental science and studies | 1,738 | 0.6 | 186 | 1.1 | 16 | 2.1 | 68 | 0.4 | 90 | 0.9 | 2 | 1.0 | 852 | 0.8 | 35 | 0.6 | 80 | 1.0 | 409 | 0.4 |
| Forestry, natural resources, and conservation | 1,939 | 0.7 | 112 | 0.6 | 20 | 2.7 | 60 | 0.3 | 58 | 0.6 | 0 | 0.0 | 1,094 | 1.0 | 47 | 0.8 | 70 | 0.9 | 478 | 0.4 |
| Physical sciences | 36,506 | 13.0 | 2,094 | 11.8 | 63 | 8.4 | 1,961 | 11.2 | 728 | 7.0 | 15 | 7.4 | 15,027 | 13.8 | 710 | 11.8 | 831 | 10.7 | 15,077 | 13.4 |
| Astronomy and astrophysics | 1,373 | 0.5 | 107 | 0.6 | 6 | 0.8 | 96 | 0.5 | 30 | 0.3 | 0 | 0.0 | 724 | 0.7 | 46 | 0.8 | 38 | 0.5 | 326 | 0.3 |
| Chemistry | 19,748 | 7.0 | 1,261 | 7.1 | 34 | 4.5 | 1,160 | 6.6 | 444 | 4.2 | 10 | 5.0 | 8,208 | 7.6 | 398 | 6.6 | 414 | 5.3 | 7,819 | 6.9 |
| Materials sciences | 1,013 | 0.4 | 41 | 0.2 | 3 | 0.4 | 68 | 0.4 | 38 | 0.4 | 1 | 0.5 | 322 | 0.3 | 13 | 0.2 | 33 | 0.4 | 494 | 0.4 |
| Physics | 13,951 | 4.9 | 674 | 3.8 | 20 | 2.7 | 623 | 3.6 | 190 | 1.8 | 4 | 2.0 | 5,613 | 5.2 | 250 | 4.2 | 338 | 4.4 | 6,239 | 5.5 |
| Physical sciences nec | 421 | 0.1 | 11 | 0.1 | 0 | 0.0 | 14 | 0.1 | 26 | 0.2 | 0 | 0.0 | 160 | 0.1 | 3 | * | 8 | 0.1 | 199 | 0.2 |
| Psychology | 20,231 | 7.2 | 2,570 | 14.5 | 95 | 12.7 | 1,221 | 7.0 | 1,475 | 14.1 | 24 | 11.9 | 11,362 | 10.5 | 781 | 13.0 | 686 | 8.8 | 2,017 | 1.8 |
| Clinical psychology | 3,785 | 1.3 | 701 | 4.0 | 15 | 2.0 | 240 | 1.4 | 207 | 2.0 | 4 | 2.0 | 2,069 | 1.9 | 185 | 3.1 | 216 | 2.8 | 148 | 0.1 |
| Counseling and applied psychology | 6,537 | 2.3 | 874 | 4.9 | 39 | 5.2 | 359 | 2.0 | 743 | 7.1 | 12 | 5.9 | 3,479 | 3.2 | 221 | 3.7 | 206 | 2.7 | 604 | 0.5 |
| Psychology, general | 6,749 | 2.4 | 725 | 4.1 | 29 | 3.9 | 389 | 2.2 | 386 | 3.7 | 6 | 3.0 | 4,121 | 3.8 | 271 | 4.5 | 190 | 2.4 | 632 | 0.6 |
| Research and experimental psychology | 3,160 | 1.1 | 270 | 1.5 | 12 | 1.6 | 233 | 1.3 | 139 | 1.3 | 2 | 1.0 | 1,693 | 1.6 | 104 | 1.7 | 74 | 1.0 | 633 | 0.6 |
| Social sciences | 35,392 | 12.6 | 2,509 | 14.2 | 206 | 27.5 | 1,635 | 9.3 | 2,025 | 19.4 | 40 | 19.8 | 14,275 | 13.1 | 804 | 13.4 | 1,288 | 16.6 | 12,610 | 11.2 |
| Agricultural economics | 806 | 0.3 | 19 | 0.1 | 0 | 0.0 | 39 | 0.2 | 19 | 0.2 | 0 | 0.0 | 157 | 0.1 | 7 | 0.1 | 16 | 0.2 | 549 | 0.5 |
| Anthropology | 4,365 | 1.5 | 402 | 2.3 | 52 | 6.9 | 173 | 1.0 | 135 | 1.3 | 8 | 4.0 | 2,343 | 2.2 | 133 | 2.2 | 240 | 3.1 | 879 | 0.8 |
| Criminal justice and safety studies | 900 | 0.3 | 77 | 0.4 | 1 | 0.1 | 17 | 0.1 | 104 | 1.0 | 2 | 1.0 | 506 | 0.5 | 39 | 0.6 | 75 | 1.0 | 79 | 0.1 |
| Economics (except agricultural) | 8,045 | 2.9 | 202 | 1.1 | 4 | 0.5 | 379 | 2.2 | 115 | 1.1 | 2 | 1.0 | 1,795 | 1.7 | 71 | 1.2 | 179 | 2.3 | 5,298 | 4.7 |
| Geography and cartography | 1,741 | 0.6 | 106 | 0.6 | 11 | 1.5 | 60 | 0.3 | 55 | 0.5 | 2 | 1.0 | 794 | 0.7 | 29 | 0.5 | 59 | 0.8 | 625 | 0.6 |
| History and philosophy of science | 257 | 0.1 | 13 | 0.1 | 0 | 0.0 | 8 | * | 27 | 0.3 | 0 | 0.0 | 132 | 0.1 | 6 | 0.1 | 6 | 0.1 | 65 | 0.1 |
| Human development | 731 | 0.3 | 61 | 0.3 | 4 | 0.5 | 29 | 0.2 | 83 | 0.8 | 1 | 0.5 | 370 | 0.3 | 29 | 0.5 | 17 | 0.2 | 137 | 0.1 |
| International relations and national security studies | 413 | 0.1 | 34 | 0.2 | 1 | 0.1 | 21 | 0.1 | 20 | 0.2 | 0 | 0.0 | 167 | 0.2 | 9 | 0.1 | 8 | 0.1 | 153 | 0.1 |
| Linguistics | 1,616 | 0.6 | 76 | 0.4 | 16 | 2.1 | 80 | 0.5 | 28 | 0.3 | 0 | 0.0 | 643 | 0.6 | 36 | 0.6 | 50 | 0.6 | 687 | 0.6 |
| Political science and government | 5,488 | 1.9 | 325 | 1.8 | 16 | 2.1 | 214 | 1.2 | 247 | 2.4 | 7 | 3.5 | 2,643 | 2.4 | 126 | 2.1 | 230 | 3.0 | 1,680 | 1.5 |
| Public policy analysis | 2,414 | 0.9 | 158 | 0.9 | 12 | 1.6 | 165 | 0.9 | 289 | 2.8 | 4 | 2.0 | 953 | 0.9 | 57 | 0.9 | 127 | 1.6 | 649 | 0.6 |
| Sociology | 5,070 | 1.8 | 567 | 3.2 | 16 | 2.1 | 273 | 1.6 | 485 | 4.6 | 4 | 2.0 | 2,379 | 2.2 | 155 | 2.6 | 154 | 2.0 | 1,037 | 0.9 |
| Social sciences nec | 3,546 | 1.3 | 469 | 2.7 | 73 | 9.7 | 177 | 1.0 | 418 | 4.0 | 10 | 5.0 | 1,393 | 1.3 | 107 | 1.8 | 127 | 1.6 | 772 | 0.7 |
| Engineering | 72,065 | 25.6 | 2,797 | 15.8 | 74 | 9.9 | 4,381 | 25.0 | 1,512 | 14.5 | 26 | 12.9 | 18,771 | 17.3 | 1,101 | 18.3 | 1,447 | 18.6 | 41,956 | 37.2 |
| Aerospace, aeronautical, and astronautical engineering | 2,554 | 0.9 | 121 | 0.7 | 3 | 0.4 | 167 | 1.0 | 39 | 0.4 | 2 | 1.0 | 1,005 | 0.9 | 63 | 1.0 | 46 | 0.6 | 1,108 | 1.0 |
| Agricultural engineering | 662 | 0.2 | 23 | 0.1 | 1 | 0.1 | 30 | 0.2 | 16 | 0.2 | 1 | 0.5 | 152 | 0.1 | 12 | 0.2 | 8 | 0.1 | 419 | 0.4 |
| Bioengineering and biomedical engineering | 7,715 | 2.7 | 549 | 3.1 | 12 | 1.6 | 973 | 5.5 | 224 | 2.1 | 8 | 4.0 | 3,064 | 2.8 | 225 | 3.7 | 233 | 3.0 | 2,427 | 2.2 |

TABLE 4-4c

## Citizenship, ethnicity, and race of doctoral students, by detailed field: 2019

(Number and percent)

| Detailed field | Total | | Hispanic or Latino | | Not Hispanic or Latino | | | | | | | | | | | | Unknown ethnicity and race | | Temporary visa holders | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | American Indian or Alaska Native | | Asian | | Black or African American | | Native Hawaiian or Other Pacific Islander | | White | | More than one race | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Biological and biosystems engineering | 219 | 0.1 | 11 | 0.1 | 2 | 0.3 | 5 | * | 2 | * | 1 | 0.5 | 70 | 0.1 | 3 | * | 2 | * | 123 | 0.1 |
| Chemical engineering | 7,057 | 2.5 | 269 | 1.5 | 8 | 1.1 | 541 | 3.1 | 122 | 1.2 | 2 | 1.0 | 2,243 | 2.1 | 123 | 2.0 | 106 | 1.4 | 3,643 | 3.2 |
| Civil engineering | 7,752 | 2.8 | 270 | 1.5 | 7 | 0.9 | 239 | 1.4 | 166 | 1.6 | 2 | 1.0 | 1,598 | 1.5 | 80 | 1.3 | 140 | 1.8 | 5,250 | 4.7 |
| Electrical, electronics, and communications engineering | 18,577 | 6.6 | 439 | 2.5 | 6 | 0.8 | 1,007 | 5.7 | 287 | 2.7 | 1 | 0.5 | 3,159 | 2.9 | 159 | 2.6 | 348 | 4.5 | 13,171 | 11.7 |
| Engineering mechanics, physics, and science | 1,447 | 0.5 | 55 | 0.3 | 3 | 0.4 | 92 | 0.5 | 25 | 0.2 | 1 | 0.5 | 407 | 0.4 | 28 | 0.5 | 30 | 0.4 | 806 | 0.7 |
| Industrial and manufacturing engineering | 3,762 | 1.3 | 100 | 0.6 | 2 | 0.3 | 190 | 1.1 | 134 | 1.3 | 1 | 0.5 | 801 | 0.7 | 41 | 0.7 | 96 | 1.2 | 2,397 | 2.1 |
| Mechanical engineering | 11,247 | 4.0 | 475 | 2.7 | 15 | 2.0 | 536 | 3.1 | 198 | 1.9 | 3 | 1.5 | 2,894 | 2.7 | 172 | 2.9 | 234 | 3.0 | 6,720 | 6.0 |
| Metallurgical and materials engineering | 4,616 | 1.6 | 237 | 1.3 | 7 | 0.9 | 325 | 1.9 | 75 | 0.7 | 2 | 1.0 | 1,454 | 1.3 | 92 | 1.5 | 76 | 1.0 | 2,348 | 2.1 |
| Mining engineering | 201 | 0.1 | 9 | 0.1 | 1 | 0.1 | 2 | * | 4 | * | 0 | 0.0 | 76 | 0.1 | 2 | * | 4 | 0.1 | 103 | 0.1 |
| Nanotechnology | 146 | 0.1 | 5 | * | 0 | 0.0 | 13 | 0.1 | 2 | * | 0 | 0.0 | 48 | * | 4 | 0.1 | 5 | 0.1 | 69 | 0.1 |
| Nuclear engineering | 1,031 | 0.4 | 63 | 0.4 | 1 | 0.1 | 36 | 0.2 | 19 | 0.2 | 0 | 0.0 | 515 | 0.5 | 27 | 0.4 | 28 | 0.4 | 342 | 0.3 |
| Petroleum engineering | 607 | 0.2 | 6 | * | 0 | 0.0 | 16 | 0.1 | 10 | 0.1 | 0 | 0.0 | 56 | 0.1 | 5 | 0.1 | 15 | 0.2 | 499 | 0.4 |
| Engineering nec | 4,472 | 1.6 | 165 | 0.9 | 6 | 0.8 | 209 | 1.2 | 189 | 1.8 | 2 | 1.0 | 1,229 | 1.1 | 65 | 1.1 | 76 | 1.0 | 2,531 | 2.2 |
| Health | 15,928 | 5.7 | 1,030 | 5.8 | 52 | 6.9 | 1,209 | 6.9 | 1,484 | 14.2 | 16 | 7.9 | 7,295 | 6.7 | 356 | 5.9 | 593 | 7.6 | 3,893 | 3.5 |
| Clinical medicine[a] | 4,571 | 1.6 | 429 | 2.4 | 21 | 2.8 | 376 | 2.1 | 594 | 5.7 | 10 | 5.0 | 1,911 | 1.8 | 129 | 2.1 | 154 | 2.0 | 947 | 0.8 |
| Public health | 4,191 | 1.5 | 393 | 2.2 | 19 | 2.5 | 345 | 2.0 | 575 | 5.5 | 9 | 4.5 | 1,715 | 1.6 | 117 | 1.9 | 146 | 1.9 | 872 | 0.8 |
| Clinical medicine nec | 380 | 0.1 | 36 | 0.2 | 2 | 0.3 | 31 | 0.2 | 19 | 0.2 | 1 | 0.5 | 196 | 0.2 | 12 | 0.2 | 8 | 0.1 | 75 | 0.1 |
| Other health | 11,357 | 4.0 | 601 | 3.4 | 31 | 4.1 | 833 | 4.7 | 890 | 8.5 | 6 | 3.0 | 5,384 | 5.0 | 227 | 3.8 | 439 | 5.6 | 2,946 | 2.6 |
| Communication disorders sciences | 911 | 0.3 | 64 | 0.4 | 1 | 0.1 | 44 | 0.3 | 49 | 0.5 | 0 | 0.0 | 549 | 0.5 | 20 | 0.3 | 32 | 0.4 | 152 | 0.1 |
| Dental sciences | 208 | 0.1 | 4 | * | 0 | 0.0 | 15 | 0.1 | 4 | * | 0 | 0.0 | 41 | * | 4 | 0.1 | 6 | 0.1 | 134 | 0.1 |
| Nursing science | 3,439 | 1.2 | 190 | 1.1 | 17 | 2.3 | 195 | 1.1 | 499 | 4.8 | 3 | 1.5 | 1,942 | 1.8 | 59 | 1.0 | 147 | 1.9 | 387 | 0.3 |
| Pharmaceutical sciences | 3,121 | 1.1 | 151 | 0.9 | 5 | 0.7 | 363 | 2.1 | 123 | 1.2 | 1 | 0.5 | 851 | 0.8 | 63 | 1.0 | 68 | 0.9 | 1,496 | 1.3 |
| Veterinary biomedical and clinical sciences | 692 | 0.2 | 27 | 0.2 | 0 | 0.0 | 27 | 0.2 | 15 | 0.1 | 0 | 0.0 | 329 | 0.3 | 20 | 0.3 | 79 | 1.0 | 195 | 0.2 |
| Other health nec | 2,986 | 1.1 | 165 | 0.9 | 8 | 1.1 | 189 | 1.1 | 200 | 1.9 | 2 | 1.0 | 1,672 | 1.5 | 61 | 1.0 | 107 | 1.4 | 582 | 0.5 |

* = value < 0.05%.

nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec.

**Note(s):**

Percentages may not add to total because of rounding. Ethnicity and race data are available only for U.S. citizens and permanent residents.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-5

## Units and institutions with graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field: 2019

(Number)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Units | Institutions | Units | Institutions | Units | Institutions | Units | Institutions | Units | Institutions |
| All detailed fields | 13,149 | 707 | 10,281 | 695 | 7,135 | 410 | 7,533 | 338 | 5,460 | 267 |
| Science | 9,451 | 685 | 7,119 | 668 | 5,148 | 378 | 4,287 | 331 | 3,109 | 255 |
| Agricultural sciences | 291 | 88 | 268 | 88 | 185 | 54 | 183 | 54 | 169 | 46 |
| Biological and biomedical sciences | 2,638 | 508 | 1,581 | 483 | 1,848 | 289 | 1,745 | 278 | 1,195 | 200 |
| Biochemistry | 190 | 154 | 93 | 87 | 158 | 131 | 132 | 114 | 103 | 84 |
| Biology | 386 | 348 | 338 | 320 | 166 | 150 | 201 | 175 | 126 | 102 |
| Biomedical sciences | 175 | 123 | 112 | 88 | 106 | 84 | 61 | 45 | 37 | 32 |
| Biophysics | 44 | 38 | 6 | 6 | 44 | 38 | 18 | 14 | 7 | 7 |
| Biostatistics and bioinformatics | 185 | 113 | 135 | 94 | 119 | 79 | 79 | 49 | 57 | 42 |
| Biotechnology | 76 | 65 | 71 | 60 | 8 | 8 | 19 | 18 | 12 | 10 |
| Botany and plant biology | 67 | 50 | 55 | 45 | 57 | 43 | 49 | 36 | 31 | 23 |
| Cell, cellular biology, and anatomical sciences | 187 | 124 | 79 | 65 | 154 | 109 | 119 | 89 | 88 | 66 |
| Ecology and population biology | 107 | 87 | 67 | 58 | 79 | 64 | 52 | 44 | 35 | 30 |
| Epidemiology | 85 | 70 | 58 | 53 | 65 | 59 | 41 | 38 | 20 | 20 |
| Genetics | 98 | 75 | 48 | 39 | 73 | 61 | 93 | 57 | 74 | 44 |
| Microbiological sciences and immunology | 174 | 126 | 79 | 66 | 146 | 110 | 156 | 106 | 115 | 77 |
| Molecular biology | 53 | 47 | 20 | 20 | 40 | 34 | 41 | 37 | 29 | 25 |
| Neurobiology and neuroscience | 178 | 131 | 44 | 41 | 160 | 123 | 146 | 95 | 96 | 67 |
| Nutrition science | 101 | 82 | 92 | 75 | 53 | 49 | 44 | 32 | 24 | 21 |
| Pathology and experimental pathology | 44 | 44 | 14 | 14 | 39 | 39 | 82 | 55 | 51 | 42 |
| Pharmacology and toxicology | 130 | 99 | 63 | 58 | 114 | 89 | 98 | 83 | 75 | 59 |
| Physiology | 179 | 129 | 97 | 85 | 132 | 97 | 167 | 91 | 107 | 67 |
| Zoology and animal biology | 75 | 52 | 62 | 47 | 65 | 45 | 46 | 36 | 35 | 27 |
| Biological and biomedical sciences nec | 104 | 69 | 48 | 38 | 70 | 50 | 101 | 51 | 73 | 39 |
| Computer and information sciences | 905 | 424 | 833 | 420 | 266 | 176 | 179 | 131 | 149 | 88 |
| Computer science | 264 | 226 | 248 | 217 | 111 | 102 | 75 | 71 | 56 | 47 |
| Computer and information sciences, general | 350 | 240 | 311 | 236 | 108 | 79 | 72 | 61 | 55 | 39 |
| Computer and information sciences nec | 291 | 192 | 274 | 187 | 47 | 38 | 32 | 27 | 38 | 28 |
| Geosciences, atmospheric sciences, and ocean sciences | 390 | 226 | 335 | 212 | 265 | 155 | 266 | 143 | 226 | 115 |
| Atmospheric sciences and meteorology | 49 | 47 | 39 | 39 | 43 | 41 | 43 | 31 | 41 | 27 |
| Geological and earth sciences | 264 | 198 | 228 | 184 | 169 | 134 | 142 | 113 | 126 | 88 |
| Ocean and marine sciences | 77 | 58 | 68 | 55 | 53 | 44 | 54 | 40 | 42 | 31 |
| Geosciences, atmospheric sciences, and ocean sciences nec | ne | ne | ne | ne | ne | ne | 27 | 11 | 17 | 10 |
| Mathematics and statistics | 659 | 351 | 571 | 342 | 326 | 194 | 182 | 129 | 76 | 52 |
| Mathematics and applied mathematics | 476 | 341 | 406 | 323 | 237 | 189 | 140 | 119 | 53 | 48 |

TABLE 4-5

## Units and institutions with graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field: 2019

(Number)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Units | Institutions | Units | Institutions | Units | Institutions | Units | Institutions | Units | Institutions |
| Statistics | 183 | 152 | 165 | 147 | 89 | 81 | 42 | 41 | 23 | 20 |
| Multidisciplinary and interdisciplinary studies | 300 | 189 | 232 | 162 | 113 | 87 | 177 | 82 | 177 | 70 |
| Natural resources and conservation | 356 | 208 | 312 | 198 | 148 | 100 | 148 | 92 | 133 | 73 |
| Environmental science and studies | 199 | 152 | 171 | 136 | 66 | 57 | 62 | 56 | 48 | 40 |
| Forestry, natural resources, and conservation | 157 | 90 | 141 | 88 | 82 | 54 | 86 | 49 | 85 | 43 |
| Physical sciences | 786 | 330 | 575 | 307 | 554 | 228 | 556 | 225 | 391 | 165 |
| Astronomy and astrophysics | 63 | 52 | 17 | 17 | 57 | 47 | 62 | 45 | 50 | 33 |
| Chemistry | 357 | 309 | 284 | 261 | 229 | 204 | 222 | 196 | 154 | 135 |
| Materials sciences | 51 | 42 | 36 | 34 | 40 | 34 | 31 | 26 | 21 | 16 |
| Physics | 288 | 241 | 219 | 200 | 216 | 190 | 222 | 182 | 145 | 111 |
| Physical sciences nec | 27 | 24 | 19 | 18 | 12 | 11 | 19 | 18 | 21 | 15 |
| Psychology | 1,029 | 467 | 735 | 405 | 465 | 240 | 214 | 145 | 129 | 92 |
| Clinical psychology | 128 | 119 | 63 | 60 | 76 | 72 | 18 | 15 | 5 | 5 |
| Counseling and applied psychology | 491 | 318 | 397 | 278 | 179 | 136 | 50 | 41 | 32 | 22 |
| Psychology, general | 287 | 265 | 215 | 208 | 125 | 111 | 110 | 102 | 73 | 67 |
| Research and experimental psychology | 123 | 99 | 60 | 51 | 85 | 72 | 36 | 31 | 19 | 16 |
| Social sciences | 2,097 | 415 | 1,677 | 403 | 978 | 210 | 637 | 151 | 464 | 134 |
| Agricultural economics | 46 | 41 | 38 | 38 | 25 | 23 | 22 | 19 | 19 | 17 |
| Anthropology | 175 | 160 | 127 | 123 | 106 | 101 | 59 | 57 | 35 | 30 |
| Criminal justice and safety studies | 110 | 105 | 107 | 103 | 22 | 22 | 8 | 7 | 7 | 7 |
| Economics (except agricultural) | 267 | 199 | 209 | 174 | 152 | 129 | 50 | 43 | 43 | 39 |
| Geography and cartography | 166 | 137 | 159 | 133 | 67 | 64 | 41 | 36 | 35 | 28 |
| History and philosophy of science | 15 | 15 | 8 | 8 | 14 | 14 | 12 | 10 | 2 | 2 |
| Human development | 67 | 63 | 59 | 58 | 26 | 25 | 41 | 30 | 32 | 24 |
| International relations and national security studies | 94 | 75 | 88 | 72 | 16 | 14 | 21 | 16 | 11 | 7 |
| Linguistics | 101 | 92 | 73 | 67 | 59 | 58 | 22 | 22 | 14 | 13 |
| Political science and government | 222 | 198 | 166 | 155 | 131 | 125 | 56 | 51 | 28 | 22 |
| Public policy analysis | 143 | 109 | 110 | 87 | 58 | 52 | 59 | 47 | 63 | 45 |
| Sociology | 235 | 207 | 162 | 149 | 130 | 121 | 69 | 56 | 46 | 37 |
| Social sciences nec | 456 | 208 | 371 | 189 | 172 | 97 | 177 | 75 | 129 | 51 |
| Engineering | 2,272 | 325 | 2,051 | 318 | 1,354 | 226 | 1,051 | 201 | 822 | 169 |
| Aerospace, aeronautical, and astronautical engineering | 64 | 60 | 62 | 60 | 49 | 48 | 31 | 29 | 24 | 22 |
| Agricultural engineering | 33 | 26 | 31 | 26 | 26 | 23 | 18 | 17 | 16 | 16 |
| Bioengineering and biomedical engineering | 193 | 167 | 168 | 152 | 140 | 130 | 130 | 107 | 91 | 77 |
| Biological and biosystems engineering | 15 | 14 | 10 | 10 | 14 | 13 | 15 | 13 | 11 | 10 |

TABLE 4-5

## Units and institutions with graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers, by detailed field: 2019

(Number)

| Detailed field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Units | Institutions | Units | Institutions | Units | Institutions | Units | Institutions | Units | Institutions |
| Chemical engineering | 159 | 142 | 145 | 134 | 128 | 120 | 118 | 108 | 79 | 73 |
| Civil engineering | 330 | 202 | 308 | 200 | 185 | 139 | 157 | 117 | 120 | 86 |
| Electrical, electronics, and communications engineering | 421 | 260 | 395 | 258 | 225 | 174 | 169 | 137 | 128 | 94 |
| Engineering mechanics, physics, and science | 65 | 47 | 47 | 35 | 43 | 35 | 18 | 16 | 18 | 14 |
| Industrial and manufacturing engineering | 223 | 148 | 204 | 140 | 102 | 85 | 44 | 41 | 40 | 31 |
| Mechanical engineering | 263 | 228 | 253 | 226 | 164 | 155 | 145 | 132 | 105 | 94 |
| Metallurgical and materials engineering | 119 | 90 | 106 | 84 | 90 | 78 | 73 | 57 | 59 | 50 |
| Mining engineering | 25 | 16 | 24 | 16 | 15 | 10 | 10 | 9 | 13 | 11 |
| Nanotechnology | 7 | 7 | 4 | 4 | 3 | 3 | 16 | 13 | 17 | 16 |
| Nuclear engineering | 31 | 27 | 30 | 27 | 29 | 25 | 13 | 12 | 11 | 9 |
| Petroleum engineering | 26 | 24 | 24 | 24 | 15 | 15 | 14 | 11 | 10 | 10 |
| Engineering nec | 298 | 153 | 240 | 139 | 126 | 81 | 80 | 59 | 80 | 54 |
| Health | 1,426 | 434 | 1,111 | 413 | 633 | 220 | 2,195 | 169 | 1,529 | 146 |
| Clinical medicine[a] | 499 | 252 | 442 | 248 | 185 | 106 | 1,741 | 125 | 1,195 | 105 |
| Anesthesiology | ne | ne | ne | ne | ne | ne | 55 | 43 | 42 | 31 |
| Cardiology | ne | ne | ne | ne | ne | ne | 61 | 37 | 37 | 25 |
| Endocrinology | ne | ne | ne | ne | ne | ne | 44 | 36 | 29 | 25 |
| Gastroenterology | ne | ne | ne | ne | ne | ne | 41 | 32 | 19 | 19 |
| Hematology | ne | ne | ne | ne | ne | ne | 38 | 28 | 28 | 22 |
| Neurology | ne | ne | ne | ne | ne | ne | 111 | 58 | 73 | 42 |
| Obstetrics and gynecology | ne | ne | ne | ne | ne | ne | 53 | 37 | 31 | 26 |
| Oncology and cancer research | ne | ne | ne | ne | ne | ne | 133 | 43 | 69 | 31 |
| Ophthalmology | ne | ne | ne | ne | ne | ne | 73 | 56 | 42 | 36 |
| Otorhinolaryngology | ne | ne | ne | ne | ne | ne | 35 | 33 | 27 | 26 |
| Pediatrics | ne | ne | ne | ne | ne | ne | 129 | 57 | 96 | 47 |
| Psychiatry | ne | ne | ne | ne | ne | ne | 77 | 54 | 47 | 38 |
| Public health | 446 | 242 | 399 | 238 | 165 | 97 | 159 | 87 | 135 | 67 |
| Pulmonary disease | ne | ne | ne | ne | ne | ne | 32 | 28 | 22 | 19 |
| Radiological sciences | ne | ne | ne | ne | ne | ne | 103 | 46 | 61 | 36 |
| Surgery | ne | ne | ne | ne | ne | ne | 187 | 62 | 127 | 49 |
| Clinical medicine nec | 53 | 44 | 43 | 38 | 20 | 19 | 410 | 88 | 310 | 68 |
| Other health | 927 | 383 | 669 | 346 | 448 | 200 | 454 | 137 | 334 | 110 |
| Communication disorders sciences | 244 | 224 | 223 | 217 | 70 | 64 | 33 | 30 | 23 | 22 |
| Dental sciences | 87 | 41 | 78 | 39 | 20 | 18 | 55 | 33 | 35 | 22 |
| Nursing science | 125 | 118 | 18 | 17 | 117 | 112 | 46 | 41 | 38 | 29 |
| Pharmaceutical sciences | 119 | 83 | 77 | 63 | 92 | 64 | 99 | 65 | 77 | 50 |
| Veterinary biomedical and clinical sciences | 38 | 29 | 28 | 25 | 25 | 20 | 81 | 40 | 61 | 30 |
| Other health nec | 314 | 223 | 245 | 200 | 124 | 96 | 140 | 76 | 100 | 50 |

ne = not eligible; nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec. Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Unit counts do not sum across columns.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-6a

## Agricultural sciences master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 88 | 12.3 | 88 | 12.3 | 54 | 7.6 |
| Schools | 88 | 10.9 | 88 | 10.9 | 54 | 6.7 |
| Units | 291 | 1.4 | 268 | 1.3 | 185 | 0.9 |
| All graduate students | 9,518 | 100.0 | 5,629 | 100.0 | 3,889 | 100.0 |
| Male | 4,231 | 44.5 | 2,373 | 42.2 | 1,858 | 47.8 |
| Female | 5,287 | 55.5 | 3,256 | 57.8 | 2,031 | 52.2 |
| U.S. citizens and permanent residents[a] | 6,651 | 69.9 | 4,576 | 81.3 | 2,075 | 53.4 |
| Hispanic or Latino | 636 | 6.7 | 470 | 8.3 | 166 | 4.3 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 33 | 0.3 | 23 | 0.4 | 10 | 0.3 |
| Asian | 267 | 2.8 | 160 | 2.8 | 107 | 2.8 |
| Black or African American | 329 | 3.5 | 227 | 4.0 | 102 | 2.6 |
| Native Hawaiian or Other Pacific Islander | 16 | 0.2 | 14 | 0.2 | 2 | 0.1 |
| White | 5,003 | 52.6 | 3,425 | 60.8 | 1,578 | 40.6 |
| More than one race | 186 | 2.0 | 134 | 2.4 | 52 | 1.3 |
| Unknown ethnicity and race | 181 | 1.9 | 123 | 2.2 | 58 | 1.5 |
| Temporary visa holders | 2,867 | 30.1 | 1,053 | 18.7 | 1,814 | 46.6 |
| Part time | 2,769 | 29.1 | 2,125 | 37.8 | 644 | 16.6 |
| Full time | 6,749 | 70.9 | 3,504 | 62.2 | 3,245 | 83.4 |
| First time | 1,699 | 17.9 | 1,230 | 21.9 | 469 | 12.1 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 1,280 | 13.4 | 537 | 9.5 | 743 | 19.1 |
| DOD | 9 | 0.1 | 4 | 0.1 | 5 | 0.1 |
| DOE | 28 | 0.3 | 8 | 0.1 | 20 | 0.5 |
| HHS | 120 | 1.3 | 39 | 0.7 | 81 | 2.1 |
| NIH | 45 | 0.5 | 8 | 0.1 | 37 | 1.0 |
| Other HHS | 75 | 0.8 | 31 | 0.6 | 44 | 1.1 |
| NASA | 3 | * | 0 | 0.0 | 3 | 0.1 |
| NSF | 120 | 1.3 | 31 | 0.6 | 89 | 2.3 |
| USDA | 808 | 8.5 | 359 | 6.4 | 449 | 11.5 |
| Other | 192 | 2.0 | 96 | 1.7 | 96 | 2.5 |
| Nonfederal | 4,306 | 45.2 | 2,094 | 37.2 | 2,212 | 56.9 |
| Institutional | 3,424 | 36.0 | 1,650 | 29.3 | 1,774 | 45.6 |
| Domestic | 795 | 8.4 | 401 | 7.1 | 394 | 10.1 |
| Foreign | 87 | 0.9 | 43 | 0.8 | 44 | 1.1 |
| Self-support | 1,163 | 12.2 | 873 | 15.5 | 290 | 7.5 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 366 | 3.8 | 107 | 1.9 | 259 | 6.7 |
| Research assistantships | 3,850 | 40.4 | 1,816 | 32.3 | 2,034 | 52.3 |
| Teaching assistantships | 968 | 10.2 | 484 | 8.6 | 484 | 12.4 |
| Traineeships | 35 | 0.4 | 9 | 0.2 | 26 | 0.7 |
| Other types of support | 1,530 | 16.1 | 1,088 | 19.3 | 442 | 11.4 |
| Self-support | 1,163 | 12.2 | 873 | 15.5 | 290 | 7.5 |
| Other | 367 | 3.9 | 215 | 3.8 | 152 | 3.9 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-6b

## Agricultural sciences postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 54 | 7.6 | 46 | 6.4 |
| Schools | 54 | 6.7 | 46 | 5.7 |
| Units | 183 | 0.9 | 169 | 0.8 |
| All individuals | 1,079 | 100.0 | 645 | 100.0 |
| Male | 622 | 57.6 | 362 | 56.1 |
| Female | 457 | 42.4 | 283 | 43.9 |
| U.S. citizens and permanent residents[a] | 439 | 40.7 | na | na |
| Hispanic or Latino | 40 | 3.7 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 3 | 0.3 | na | na |
| Asian | 90 | 8.3 | na | na |
| Black or African American | 13 | 1.2 | na | na |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0 | na | na |
| White | 253 | 23.4 | na | na |
| More than one race | 2 | 0.2 | na | na |
| Unknown ethnicity and race | 38 | 3.5 | na | na |
| Temporary visa holders | 640 | 59.3 | na | na |
| Primary source of support | | | | |
| Federal | 469 | 43.5 | na | na |
| Nonfederal[b] | 481 | 44.6 | na | na |
| Personal resources | 3 | 0.3 | na | na |
| Unknown or not stated | 126 | 11.7 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 41 | 3.8 | na | na |
| Research grants | 706 | 65.4 | na | na |
| Traineeships | 27 | 2.5 | na | na |
| Other types of support | 305 | 28.3 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 770 | 71.4 | 496 | 76.9 |
| Professional degree | 6 | 0.6 | 24 | 3.7 |
| Dual degree | 11 | 1.0 | 3 | 0.5 |
| Doctoral degree type unknown | 292 | 27.1 | 122 | 18.9 |
| Degree origin | | | | |
| United States | 368 | 34.1 | na | na |
| Foreign country | 212 | 19.6 | na | na |
| Unknown | 499 | 46.2 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-7a

## Biological and biomedical sciences master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 508 | 71.1 | 483 | 67.6 | 289 | 40.5 |
| Schools | 569 | 70.3 | 537 | 66.4 | 338 | 41.8 |
| Units | 2,638 | 13.0 | 1,581 | 7.8 | 1,848 | 9.1 |
| All graduate students | 91,993 | 100.0 | 38,078 | 100.0 | 53,915 | 100.0 |
| Male | 37,866 | 41.2 | 13,803 | 36.2 | 24,063 | 44.6 |
| Female | 54,127 | 58.8 | 24,275 | 63.8 | 29,852 | 55.4 |
| U.S. citizens and permanent residents[a] | 73,093 | 79.5 | 32,928 | 86.5 | 40,165 | 74.5 |
| Hispanic or Latino | 8,450 | 9.2 | 3,817 | 10.0 | 4,633 | 8.6 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 276 | 0.3 | 120 | 0.3 | 156 | 0.3 |
| Asian | 8,819 | 9.6 | 4,197 | 11.0 | 4,622 | 8.6 |
| Black or African American | 5,270 | 5.7 | 3,210 | 8.4 | 2,060 | 3.8 |
| Native Hawaiian or Other Pacific Islander | 147 | 0.2 | 92 | 0.2 | 55 | 0.1 |
| White | 43,821 | 47.6 | 18,281 | 48.0 | 25,540 | 47.4 |
| More than one race | 2,630 | 2.9 | 1,193 | 3.1 | 1,437 | 2.7 |
| Unknown ethnicity and race | 3,680 | 4.0 | 2,018 | 5.3 | 1,662 | 3.1 |
| Temporary visa holders | 18,900 | 20.5 | 5,150 | 13.5 | 13,750 | 25.5 |
| Part time | 15,760 | 17.1 | 12,321 | 32.4 | 3,439 | 6.4 |
| Full time | 76,233 | 82.9 | 25,757 | 67.6 | 50,476 | 93.6 |
| First time | 23,071 | 25.1 | 13,522 | 35.5 | 9,549 | 17.7 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 18,553 | 20.2 | 1,263 | 3.3 | 17,290 | 32.1 |
| DOD | 359 | 0.4 | 64 | 0.2 | 295 | 0.5 |
| DOE | 136 | 0.1 | 8 | * | 128 | 0.2 |
| HHS | 13,736 | 14.9 | 469 | 1.2 | 13,267 | 24.6 |
| NIH | 12,999 | 14.1 | 399 | 1.0 | 12,600 | 23.4 |
| Other HHS | 737 | 0.8 | 70 | 0.2 | 667 | 1.2 |
| NASA | 59 | 0.1 | 6 | * | 53 | 0.1 |
| NSF | 2,441 | 2.7 | 210 | 0.6 | 2,231 | 4.1 |
| USDA | 633 | 0.7 | 197 | 0.5 | 436 | 0.8 |
| Other | 1,189 | 1.3 | 309 | 0.8 | 880 | 1.6 |
| Nonfederal | 38,114 | 41.4 | 7,023 | 18.4 | 31,091 | 57.7 |
| Institutional | 34,360 | 37.4 | 6,480 | 17.0 | 27,880 | 51.7 |
| Domestic | 3,258 | 3.5 | 423 | 1.1 | 2,835 | 5.3 |
| Foreign | 496 | 0.5 | 120 | 0.3 | 376 | 0.7 |
| Self-support | 19,566 | 21.3 | 17,471 | 45.9 | 2,095 | 3.9 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 10,271 | 11.2 | 512 | 1.3 | 9,759 | 18.1 |
| Research assistantships | 23,675 | 25.7 | 2,349 | 6.2 | 21,326 | 39.6 |
| Teaching assistantships | 10,670 | 11.6 | 3,157 | 8.3 | 7,513 | 13.9 |
| Traineeships | 6,099 | 6.6 | 172 | 0.5 | 5,927 | 11.0 |
| Other types of support | 25,518 | 27.7 | 19,567 | 51.4 | 5,951 | 11.0 |
| Self-support | 19,566 | 21.3 | 17,471 | 45.9 | 2,095 | 3.9 |
| Other | 5,952 | 6.5 | 2,096 | 5.5 | 3,856 | 7.2 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-7b

## Biological and biomedical sciences postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 278 | 38.9 | 200 | 28.0 |
| Schools | 337 | 41.7 | 236 | 29.2 |
| Units | 1,745 | 8.6 | 1,195 | 5.9 |
| All individuals | 21,847 | 100.0 | 8,229 | 100.0 |
| Male | 12,119 | 55.5 | 4,328 | 52.6 |
| Female | 9,728 | 44.5 | 3,901 | 47.4 |
| U.S. citizens and permanent residents[a] | 9,557 | 43.7 | na | na |
| Hispanic or Latino | 671 | 3.1 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 22 | 0.1 | na | na |
| Asian | 1,903 | 8.7 | na | na |
| Black or African American | 307 | 1.4 | na | na |
| Native Hawaiian or Other Pacific Islander | 10 | * | na | na |
| White | 5,590 | 25.6 | na | na |
| More than one race | 160 | 0.7 | na | na |
| Unknown ethnicity and race | 894 | 4.1 | na | na |
| Temporary visa holders | 12,290 | 56.3 | na | na |
| Primary source of support | | | | |
| Federal | 11,887 | 54.4 | na | na |
| Nonfederal[b] | 7,825 | 35.8 | na | na |
| Personal resources | 133 | 0.6 | na | na |
| Unknown or not stated | 2,002 | 9.2 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 1,944 | 8.9 | na | na |
| Research grants | 14,427 | 66.0 | na | na |
| Traineeships | 1,080 | 4.9 | na | na |
| Other types of support | 4,396 | 20.1 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 17,677 | 80.9 | 6,018 | 73.1 |
| Professional degree | 701 | 3.2 | 431 | 5.2 |
| Dual degree | 657 | 3.0 | 125 | 1.5 |
| Doctoral degree type unknown | 2,812 | 12.9 | 1,655 | 20.1 |
| Degree origin | | | | |
| United States | 7,486 | 34.3 | na | na |
| Foreign country | 8,044 | 36.8 | na | na |
| Unknown | 6,317 | 28.9 | na | na |

* = value < 0.05%. na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-8a

## Computer and information science master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 424 | 59.4 | 420 | 58.8 | 176 | 24.6 |
| Schools | 435 | 53.8 | 430 | 53.2 | 180 | 22.2 |
| Units | 905 | 4.5 | 833 | 4.1 | 266 | 1.3 |
| All graduate students | 101,284 | 100.0 | 84,092 | 100.0 | 17,192 | 100.0 |
| Male | 69,813 | 68.9 | 57,138 | 67.9 | 12,675 | 73.7 |
| Female | 31,471 | 31.1 | 26,954 | 32.1 | 4,517 | 26.3 |
| U.S. citizens and permanent residents[a] | 47,109 | 46.5 | 40,769 | 48.5 | 6,340 | 36.9 |
| Hispanic or Latino | 4,203 | 4.1 | 3,777 | 4.5 | 426 | 2.5 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 119 | 0.1 | 108 | 0.1 | 11 | 0.1 |
| Asian | 9,343 | 9.2 | 8,274 | 9.8 | 1,069 | 6.2 |
| Black or African American | 5,247 | 5.2 | 4,803 | 5.7 | 444 | 2.6 |
| Native Hawaiian or Other Pacific Islander | 69 | 0.1 | 58 | 0.1 | 11 | 0.1 |
| White | 23,620 | 23.3 | 19,908 | 23.7 | 3,712 | 21.6 |
| More than one race | 1,587 | 1.6 | 1,347 | 1.6 | 240 | 1.4 |
| Unknown ethnicity and race | 2,921 | 2.9 | 2,494 | 3.0 | 427 | 2.5 |
| Temporary visa holders | 54,175 | 53.5 | 43,323 | 51.5 | 10,852 | 63.1 |
| Part time | 39,164 | 38.7 | 36,557 | 43.5 | 2,607 | 15.2 |
| Full time | 62,120 | 61.3 | 47,535 | 56.5 | 14,585 | 84.8 |
| First time | 23,781 | 23.5 | 20,788 | 24.7 | 2,993 | 17.4 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 5,124 | 5.1 | 1,061 | 1.3 | 4,063 | 23.6 |
| DOD | 1,097 | 1.1 | 316 | 0.4 | 781 | 4.5 |
| DOE | 111 | 0.1 | 12 | * | 99 | 0.6 |
| HHS | 385 | 0.4 | 89 | 0.1 | 296 | 1.7 |
| NIH | 308 | 0.3 | 73 | 0.1 | 235 | 1.4 |
| Other HHS | 77 | 0.1 | 16 | * | 61 | 0.4 |
| NASA | 35 | * | 9 | * | 26 | 0.2 |
| NSF | 2,776 | 2.7 | 366 | 0.4 | 2,410 | 14.0 |
| USDA | 32 | * | 11 | * | 21 | 0.1 |
| Other | 688 | 0.7 | 258 | 0.3 | 430 | 2.5 |
| Nonfederal | 17,965 | 17.7 | 8,989 | 10.7 | 8,976 | 52.2 |
| Institutional | 16,076 | 15.9 | 8,299 | 9.9 | 7,777 | 45.2 |
| Domestic | 1,420 | 1.4 | 459 | 0.5 | 961 | 5.6 |
| Foreign | 469 | 0.5 | 231 | 0.3 | 238 | 1.4 |
| Self-support | 39,031 | 38.5 | 37,485 | 44.6 | 1,546 | 9.0 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 2,500 | 2.5 | 791 | 0.9 | 1,709 | 9.9 |
| Research assistantships | 8,192 | 8.1 | 1,764 | 2.1 | 6,428 | 37.4 |
| Teaching assistantships | 7,100 | 7.0 | 3,250 | 3.9 | 3,850 | 22.4 |
| Traineeships | 401 | 0.4 | 183 | 0.2 | 218 | 1.3 |
| Other types of support | 43,927 | 43.4 | 41,547 | 49.4 | 2,380 | 13.8 |
| Self-support | 39,031 | 38.5 | 37,485 | 44.6 | 1,546 | 9.0 |
| Other | 4,896 | 4.8 | 4,062 | 4.8 | 834 | 4.9 |

* = value < 0.05%.

DOD = Department of Defense; DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.
[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-8b

## Computer and information science postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 131 | 18.3 | 88 | 12.3 |
| Schools | 134 | 16.6 | 88 | 10.9 |
| Units | 179 | 0.9 | 149 | 0.7 |
| All individuals | 878 | 100.0 | 510 | 100.0 |
| Male | 690 | 78.6 | 388 | 76.1 |
| Female | 188 | 21.4 | 122 | 23.9 |
| U.S. citizens and permanent residents[a] | 313 | 35.6 | na | na |
| Hispanic or Latino | 11 | 1.3 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 1 | 0.1 | na | na |
| Asian | 67 | 7.6 | na | na |
| Black or African American | 7 | 0.8 | na | na |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0 | na | na |
| White | 179 | 20.4 | na | na |
| More than one race | 5 | 0.6 | na | na |
| Unknown ethnicity and race | 43 | 4.9 | na | na |
| Temporary visa holders | 565 | 64.4 | na | na |
| Primary source of support | | | | |
| Federal | 399 | 45.4 | na | na |
| Nonfederal[b] | 403 | 45.9 | na | na |
| Personal resources | 10 | 1.1 | na | na |
| Unknown or not stated | 66 | 7.5 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 122 | 13.9 | na | na |
| Research grants | 558 | 63.6 | na | na |
| Traineeships | 17 | 1.9 | na | na |
| Other types of support | 181 | 20.6 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 672 | 76.5 | 396 | 77.6 |
| Professional degree | 12 | 1.4 | 23 | 4.5 |
| Dual degree | 11 | 1.3 | 2 | 0.4 |
| Doctoral degree type unknown | 183 | 20.8 | 89 | 17.5 |
| Degree origin | | | | |
| United States | 322 | 36.7 | na | na |
| Foreign country | 204 | 23.2 | na | na |
| Unknown | 352 | 40.1 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-9a

## Geosciences, atmospheric sciences, and ocean sciences master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 226 | 31.7 | 212 | 29.7 | 155 | 21.7 |
| Schools | 229 | 28.3 | 214 | 26.5 | 156 | 19.3 |
| Units | 390 | 1.9 | 335 | 1.7 | 265 | 1.3 |
| All graduate students | 11,878 | 100.0 | 5,327 | 100.0 | 6,551 | 100.0 |
| Male | 6,234 | 52.5 | 2,749 | 51.6 | 3,485 | 53.2 |
| Female | 5,644 | 47.5 | 2,578 | 48.4 | 3,066 | 46.8 |
| U.S. citizens and permanent residents[a] | 9,326 | 78.5 | 4,841 | 90.9 | 4,485 | 68.5 |
| Hispanic or Latino | 882 | 7.4 | 472 | 8.9 | 410 | 6.3 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 39 | 0.3 | 22 | 0.4 | 17 | 0.3 |
| Asian | 377 | 3.2 | 133 | 2.5 | 244 | 3.7 |
| Black or African American | 258 | 2.2 | 152 | 2.9 | 106 | 1.6 |
| Native Hawaiian or Other Pacific Islander | 9 | 0.1 | 7 | 0.1 | 2 | * |
| White | 7,080 | 59.6 | 3,722 | 69.9 | 3,358 | 51.3 |
| More than one race | 320 | 2.7 | 154 | 2.9 | 166 | 2.5 |
| Unknown ethnicity and race | 361 | 3.0 | 179 | 3.4 | 182 | 2.8 |
| Temporary visa holders | 2,552 | 21.5 | 486 | 9.1 | 2,066 | 31.5 |
| Part time | 2,357 | 19.8 | 1,652 | 31.0 | 705 | 10.8 |
| Full time | 9,521 | 80.2 | 3,675 | 69.0 | 5,846 | 89.2 |
| First time | 2,501 | 21.1 | 1,487 | 27.9 | 1,014 | 15.5 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 2,504 | 21.1 | 635 | 11.9 | 1,869 | 28.5 |
| DOD | 183 | 1.5 | 85 | 1.6 | 98 | 1.5 |
| DOE | 90 | 0.8 | 19 | 0.4 | 71 | 1.1 |
| HHS | 31 | 0.3 | 3 | 0.1 | 28 | 0.4 |
| NIH | 23 | 0.2 | 2 | * | 21 | 0.3 |
| Other HHS | 8 | 0.1 | 1 | * | 7 | 0.1 |
| NASA | 452 | 3.8 | 51 | 1.0 | 401 | 6.1 |
| NSF | 1,188 | 10.0 | 236 | 4.4 | 952 | 14.5 |
| USDA | 26 | 0.2 | 14 | 0.3 | 12 | 0.2 |
| Other | 534 | 4.5 | 227 | 4.3 | 307 | 4.7 |
| Nonfederal | 5,699 | 48.0 | 2,100 | 39.4 | 3,599 | 54.9 |
| Institutional | 5,122 | 43.1 | 1,929 | 36.2 | 3,193 | 48.7 |
| Domestic | 481 | 4.0 | 139 | 2.6 | 342 | 5.2 |
| Foreign | 96 | 0.8 | 32 | 0.6 | 64 | 1.0 |
| Self-support | 1,318 | 11.1 | 940 | 17.6 | 378 | 5.8 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 1,122 | 9.4 | 126 | 2.4 | 996 | 15.2 |
| Research assistantships | 3,661 | 30.8 | 1,039 | 19.5 | 2,622 | 40.0 |
| Teaching assistantships | 2,579 | 21.7 | 1,222 | 22.9 | 1,357 | 20.7 |
| Traineeships | 115 | 1.0 | 20 | 0.4 | 95 | 1.5 |
| Other types of support | 2,044 | 17.2 | 1,268 | 23.8 | 776 | 11.8 |
| Self-support | 1,318 | 11.1 | 940 | 17.6 | 378 | 5.8 |
| Other | 726 | 6.1 | 328 | 6.2 | 398 | 6.1 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.
[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-9b

## Geosciences, atmospheric sciences, and ocean sciences postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 143 | 20.0 | 115 | 16.1 |
| Schools | 143 | 17.7 | 115 | 14.2 |
| Units | 266 | 1.3 | 226 | 1.1 |
| All individuals | 1,778 | 100.0 | 2,177 | 100.0 |
| Male | 1,099 | 61.8 | 1,502 | 69.0 |
| Female | 679 | 38.2 | 675 | 31.0 |
| U.S. citizens and permanent residents[a] | 871 | 49.0 | na | na |
| Hispanic or Latino | 56 | 3.1 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 1 | 0.1 | na | na |
| Asian | 90 | 5.1 | na | na |
| Black or African American | 15 | 0.8 | na | na |
| Native Hawaiian or Other Pacific Islander | 1 | 0.1 | na | na |
| White | 589 | 33.1 | na | na |
| More than one race | 29 | 1.6 | na | na |
| Unknown ethnicity and race | 90 | 5.1 | na | na |
| Temporary visa holders | 907 | 51.0 | na | na |
| Primary source of support | | | | |
| Federal | 949 | 53.4 | na | na |
| Nonfederal[b] | 702 | 39.5 | na | na |
| Personal resources | 39 | 2.2 | na | na |
| Unknown or not stated | 88 | 4.9 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 301 | 16.9 | na | na |
| Research grants | 1,171 | 65.9 | na | na |
| Traineeships | 15 | 0.8 | na | na |
| Other types of support | 291 | 16.4 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 1,484 | 83.5 | 1,642 | 75.4 |
| Professional degree | 5 | 0.3 | 15 | 0.7 |
| Dual degree | 20 | 1.1 | 3 | 0.1 |
| Doctoral degree type unknown | 269 | 15.1 | 517 | 23.7 |
| Degree origin | | | | |
| United States | 775 | 43.6 | na | na |
| Foreign country | 393 | 22.1 | na | na |
| Unknown | 610 | 34.3 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-10a

## Mathematics and statistics master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 351 | 49.2 | 342 | 47.9 | 194 | 27.2 |
| Schools | 361 | 44.6 | 351 | 43.4 | 198 | 24.5 |
| Units | 659 | 3.3 | 571 | 2.8 | 326 | 1.6 |
| All graduate students | 33,159 | 100.0 | 19,594 | 100.0 | 13,565 | 100.0 |
| Male | 20,753 | 62.6 | 11,140 | 56.9 | 9,613 | 70.9 |
| Female | 12,406 | 37.4 | 8,454 | 43.1 | 3,952 | 29.1 |
| U.S. citizens and permanent residents[a] | 16,250 | 49.0 | 9,639 | 49.2 | 6,611 | 48.7 |
| Hispanic or Latino | 1,679 | 5.1 | 1,123 | 5.7 | 556 | 4.1 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 57 | 0.2 | 42 | 0.2 | 15 | 0.1 |
| Asian | 2,391 | 7.2 | 1,619 | 8.3 | 772 | 5.7 |
| Black or African American | 716 | 2.2 | 519 | 2.6 | 197 | 1.5 |
| Native Hawaiian or Other Pacific Islander | 7 | * | 5 | * | 2 | * |
| White | 9,913 | 29.9 | 5,425 | 27.7 | 4,488 | 33.1 |
| More than one race | 486 | 1.5 | 256 | 1.3 | 230 | 1.7 |
| Unknown ethnicity and race | 1,001 | 3.0 | 650 | 3.3 | 351 | 2.6 |
| Temporary visa holders | 16,909 | 51.0 | 9,955 | 50.8 | 6,954 | 51.3 |
| Part time | 7,478 | 22.6 | 6,235 | 31.8 | 1,243 | 9.2 |
| Full time | 25,681 | 77.4 | 13,359 | 68.2 | 12,322 | 90.8 |
| First time | 9,348 | 28.2 | 6,772 | 34.6 | 2,576 | 19.0 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 1,463 | 4.4 | 157 | 0.8 | 1,306 | 9.6 |
| DOD | 151 | 0.5 | 33 | 0.2 | 118 | 0.9 |
| DOE | 40 | 0.1 | 6 | * | 34 | 0.3 |
| HHS | 211 | 0.6 | 21 | 0.1 | 190 | 1.4 |
| NIH | 182 | 0.5 | 19 | 0.1 | 163 | 1.2 |
| Other HHS | 29 | 0.1 | 2 | * | 27 | 0.2 |
| NASA | 19 | 0.1 | 1 | * | 18 | 0.1 |
| NSF | 882 | 2.7 | 52 | 0.3 | 830 | 6.1 |
| USDA | 21 | 0.1 | 2 | * | 19 | 0.1 |
| Other | 139 | 0.4 | 42 | 0.2 | 97 | 0.7 |
| Nonfederal | 13,651 | 41.2 | 3,395 | 17.3 | 10,256 | 75.6 |
| Institutional | 13,152 | 39.7 | 3,241 | 16.5 | 9,911 | 73.1 |
| Domestic | 338 | 1.0 | 95 | 0.5 | 243 | 1.8 |
| Foreign | 161 | 0.5 | 59 | 0.3 | 102 | 0.8 |
| Self-support | 10,567 | 31.9 | 9,807 | 50.1 | 760 | 5.6 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 1,933 | 5.8 | 295 | 1.5 | 1,638 | 12.1 |
| Research assistantships | 2,052 | 6.2 | 353 | 1.8 | 1,699 | 12.5 |
| Teaching assistantships | 9,521 | 28.7 | 1,973 | 10.1 | 7,548 | 55.6 |
| Traineeships | 209 | 0.6 | 25 | 0.1 | 184 | 1.4 |
| Other types of support | 11,966 | 36.1 | 10,713 | 54.7 | 1,253 | 9.2 |
| Self-support | 10,567 | 31.9 | 9,807 | 50.1 | 760 | 5.6 |
| Other | 1,399 | 4.2 | 906 | 4.6 | 493 | 3.6 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-10b

## Mathematics and statistics postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 129 | 18.1 | 52 | 7.3 |
| Schools | 130 | 16.1 | 53 | 6.6 |
| Units | 182 | 0.9 | 76 | 0.4 |
| All individuals | 1,070 | 100.0 | 305 | 100.0 |
| Male | 799 | 74.7 | 214 | 70.2 |
| Female | 271 | 25.3 | 91 | 29.8 |
| U.S. citizens and permanent residents[a] | 480 | 44.9 | na | na |
| Hispanic or Latino | 25 | 2.3 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 0 | 0.0 | na | na |
| Asian | 70 | 6.5 | na | na |
| Black or African American | 9 | 0.8 | na | na |
| Native Hawaiian or Other Pacific Islander | 1 | 0.1 | na | na |
| White | 323 | 30.2 | na | na |
| More than one race | 10 | 0.9 | na | na |
| Unknown ethnicity and race | 42 | 3.9 | na | na |
| Temporary visa holders | 590 | 55.1 | na | na |
| Primary source of support | | | | |
| Federal | 326 | 30.5 | na | na |
| Nonfederal[b] | 648 | 60.6 | na | na |
| Personal resources | 5 | 0.5 | na | na |
| Unknown or not stated | 91 | 8.5 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 173 | 16.2 | na | na |
| Research grants | 435 | 40.7 | na | na |
| Traineeships | 49 | 4.6 | na | na |
| Other types of support | 413 | 38.6 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 907 | 84.8 | 259 | 84.9 |
| Professional degree | 5 | 0.5 | 2 | 0.7 |
| Dual degree | 9 | 0.8 | 0 | 0.0 |
| Doctoral degree type unknown | 149 | 13.9 | 44 | 14.4 |
| Degree origin | | | | |
| United States | 433 | 40.5 | na | na |
| Foreign country | 242 | 22.6 | na | na |
| Unknown | 395 | 36.9 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-11a

## Multidisciplinary and interdisciplinary studies master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 189 | 26.5 | 162 | 22.7 | 87 | 12.2 |
| Schools | 198 | 24.5 | 167 | 20.6 | 92 | 11.4 |
| Units | 300 | 1.5 | 232 | 1.1 | 113 | 0.6 |
| All graduate students | 11,181 | 100.0 | 8,203 | 100.0 | 2,978 | 100.0 |
| Male | 5,252 | 47.0 | 3,803 | 46.4 | 1,449 | 48.7 |
| Female | 5,929 | 53.0 | 4,400 | 53.6 | 1,529 | 51.3 |
| U.S. citizens and permanent residents[a] | 8,114 | 72.6 | 6,015 | 73.3 | 2,099 | 70.5 |
| Hispanic or Latino | 935 | 8.4 | 734 | 8.9 | 201 | 6.7 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 36 | 0.3 | 21 | 0.3 | 15 | 0.5 |
| Asian | 880 | 7.9 | 686 | 8.4 | 194 | 6.5 |
| Black or African American | 788 | 7.0 | 619 | 7.5 | 169 | 5.7 |
| Native Hawaiian or Other Pacific Islander | 20 | 0.2 | 13 | 0.2 | 7 | 0.2 |
| White | 4,807 | 43.0 | 3,450 | 42.1 | 1,357 | 45.6 |
| More than one race | 292 | 2.6 | 231 | 2.8 | 61 | 2.0 |
| Unknown ethnicity and race | 356 | 3.2 | 261 | 3.2 | 95 | 3.2 |
| Temporary visa holders | 3,067 | 27.4 | 2,188 | 26.7 | 879 | 29.5 |
| Part time | 4,148 | 37.1 | 3,534 | 43.1 | 614 | 20.6 |
| Full time | 7,033 | 62.9 | 4,669 | 56.9 | 2,364 | 79.4 |
| First time | 2,886 | 25.8 | 2,397 | 29.2 | 489 | 16.4 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 497 | 4.4 | 125 | 1.5 | 372 | 12.5 |
| DOD | 54 | 0.5 | 22 | 0.3 | 32 | 1.1 |
| DOE | 26 | 0.2 | 3 | * | 23 | 0.8 |
| HHS | 123 | 1.1 | 11 | 0.1 | 112 | 3.8 |
| NIH | 112 | 1.0 | 10 | 0.1 | 102 | 3.4 |
| Other HHS | 11 | 0.1 | 1 | * | 10 | 0.3 |
| NASA | 6 | 0.1 | 4 | * | 2 | 0.1 |
| NSF | 159 | 1.4 | 24 | 0.3 | 135 | 4.5 |
| USDA | 38 | 0.3 | 11 | 0.1 | 27 | 0.9 |
| Other | 91 | 0.8 | 50 | 0.6 | 41 | 1.4 |
| Nonfederal | 2,886 | 25.8 | 1,186 | 14.5 | 1,700 | 57.1 |
| Institutional | 2,708 | 24.2 | 1,106 | 13.5 | 1,602 | 53.8 |
| Domestic | 138 | 1.2 | 65 | 0.8 | 73 | 2.5 |
| Foreign | 40 | 0.4 | 15 | 0.2 | 25 | 0.8 |
| Self-support | 3,650 | 32.6 | 3,358 | 40.9 | 292 | 9.8 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 697 | 6.2 | 347 | 4.2 | 350 | 11.8 |
| Research assistantships | 890 | 8.0 | 239 | 2.9 | 651 | 21.9 |
| Teaching assistantships | 780 | 7.0 | 277 | 3.4 | 503 | 16.9 |
| Traineeships | 97 | 0.9 | 16 | 0.2 | 81 | 2.7 |
| Other types of support | 4,569 | 40.9 | 3,790 | 46.2 | 779 | 26.2 |
| Self-support | 3,650 | 32.6 | 3,358 | 40.9 | 292 | 9.8 |
| Other | 919 | 8.2 | 432 | 5.3 | 487 | 16.4 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.
[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-11b

## Multidisciplinary and interdisciplinary studies postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 82 | 11.5 | 70 | 9.8 |
| Schools | 84 | 10.4 | 71 | 8.8 |
| Units | 177 | 0.9 | 177 | 0.9 |
| All individuals | 972 | 100.0 | 820 | 100.0 |
| Male | 545 | 56.1 | 533 | 65.0 |
| Female | 427 | 43.9 | 287 | 35.0 |
| U.S. citizens and permanent residents[a] | 512 | 52.7 | na | na |
| Hispanic or Latino | 23 | 2.4 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 4 | 0.4 | na | na |
| Asian | 62 | 6.4 | na | na |
| Black or African American | 23 | 2.4 | na | na |
| Native Hawaiian or Other Pacific Islander | 2 | 0.2 | na | na |
| White | 346 | 35.6 | na | na |
| More than one race | 7 | 0.7 | na | na |
| Unknown ethnicity and race | 45 | 4.6 | na | na |
| Temporary visa holders | 460 | 47.3 | na | na |
| Primary source of support | | | | |
| Federal | 462 | 47.5 | na | na |
| Nonfederal[b] | 426 | 43.8 | na | na |
| Personal resources | 18 | 1.9 | na | na |
| Unknown or not stated | 66 | 6.8 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 96 | 9.9 | na | na |
| Research grants | 575 | 59.2 | na | na |
| Traineeships | 39 | 4.0 | na | na |
| Other types of support | 262 | 27.0 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 750 | 77.2 | 649 | 79.1 |
| Professional degree | 13 | 1.3 | 20 | 2.4 |
| Dual degree | 14 | 1.4 | 8 | 1.0 |
| Doctoral degree type unknown | 195 | 20.1 | 143 | 17.4 |
| Degree origin | | | | |
| United States | 417 | 42.9 | na | na |
| Foreign country | 233 | 24.0 | na | na |
| Unknown | 322 | 33.1 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-12a

## Natural resources and conservation master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 208 | 29.1 | 198 | 27.7 | 100 | 14.0 |
| Schools | 212 | 26.2 | 201 | 24.8 | 102 | 12.6 |
| Units | 356 | 1.8 | 312 | 1.5 | 148 | 0.7 |
| All graduate students | 11,743 | 100.0 | 8,066 | 100.0 | 3,677 | 100.0 |
| Male | 5,057 | 43.1 | 3,392 | 42.1 | 1,665 | 45.3 |
| Female | 6,686 | 56.9 | 4,674 | 57.9 | 2,012 | 54.7 |
| U.S. citizens and permanent residents[a] | 10,040 | 85.5 | 7,250 | 89.9 | 2,790 | 75.9 |
| Hispanic or Latino | 989 | 8.4 | 691 | 8.6 | 298 | 8.1 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 122 | 1.0 | 86 | 1.1 | 36 | 1.0 |
| Asian | 358 | 3.0 | 230 | 2.9 | 128 | 3.5 |
| Black or African American | 364 | 3.1 | 216 | 2.7 | 148 | 4.0 |
| Native Hawaiian or Other Pacific Islander | 23 | 0.2 | 21 | 0.3 | 2 | 0.1 |
| White | 7,388 | 62.9 | 5,442 | 67.5 | 1,946 | 52.9 |
| More than one race | 355 | 3.0 | 273 | 3.4 | 82 | 2.2 |
| Unknown ethnicity and race | 441 | 3.8 | 291 | 3.6 | 150 | 4.1 |
| Temporary visa holders | 1,703 | 14.5 | 816 | 10.1 | 887 | 24.1 |
| Part time | 3,642 | 31.0 | 2,890 | 35.8 | 752 | 20.5 |
| Full time | 8,101 | 69.0 | 5,176 | 64.2 | 2,925 | 79.5 |
| First time | 2,536 | 21.6 | 2,081 | 25.8 | 455 | 12.4 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 1,215 | 10.3 | 577 | 7.2 | 638 | 17.4 |
| DOD | 31 | 0.3 | 20 | 0.2 | 11 | 0.3 |
| DOE | 40 | 0.3 | 14 | 0.2 | 26 | 0.7 |
| HHS | 94 | 0.8 | 49 | 0.6 | 45 | 1.2 |
| NIH | 23 | 0.2 | 3 | * | 20 | 0.5 |
| Other HHS | 71 | 0.6 | 46 | 0.6 | 25 | 0.7 |
| NASA | 36 | 0.3 | 9 | 0.1 | 27 | 0.7 |
| NSF | 305 | 2.6 | 86 | 1.1 | 219 | 6.0 |
| USDA | 332 | 2.8 | 177 | 2.2 | 155 | 4.2 |
| Other | 377 | 3.2 | 222 | 2.8 | 155 | 4.2 |
| Nonfederal | 4,016 | 34.2 | 2,114 | 26.2 | 1,902 | 51.7 |
| Institutional | 3,516 | 29.9 | 1,861 | 23.1 | 1,655 | 45.0 |
| Domestic | 429 | 3.7 | 218 | 2.7 | 211 | 5.7 |
| Foreign | 71 | 0.6 | 35 | 0.4 | 36 | 1.0 |
| Self-support | 2,870 | 24.4 | 2,485 | 30.8 | 385 | 10.5 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 698 | 5.9 | 281 | 3.5 | 417 | 11.3 |
| Research assistantships | 2,371 | 20.2 | 1,189 | 14.7 | 1,182 | 32.1 |
| Teaching assistantships | 1,390 | 11.8 | 700 | 8.7 | 690 | 18.8 |
| Traineeships | 64 | 0.5 | 41 | 0.5 | 23 | 0.6 |
| Other types of support | 3,578 | 30.5 | 2,965 | 36.8 | 613 | 16.7 |
| Self-support | 2,870 | 24.4 | 2,485 | 30.8 | 385 | 10.5 |
| Other | 708 | 6.0 | 480 | 6.0 | 228 | 6.2 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-12b

## Natural resources and conservation postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 92 | 12.9 | 73 | 10.2 |
| Schools | 92 | 11.4 | 73 | 9.0 |
| Units | 148 | 0.7 | 133 | 0.7 |
| All individuals | 806 | 100.0 | 582 | 100.0 |
| Male | 428 | 53.1 | 359 | 61.7 |
| Female | 378 | 46.9 | 223 | 38.3 |
| U.S. citizens and permanent residents[a] | 514 | 63.8 | na | na |
| Hispanic or Latino | 18 | 2.2 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 1 | 0.1 | na | na |
| Asian | 30 | 3.7 | na | na |
| Black or African American | 20 | 2.5 | na | na |
| Native Hawaiian or Other Pacific Islander | 3 | 0.4 | na | na |
| White | 349 | 43.3 | na | na |
| More than one race | 8 | 1.0 | na | na |
| Unknown ethnicity and race | 85 | 10.5 | na | na |
| Temporary visa holders | 292 | 36.2 | na | na |
| Primary source of support | | | | |
| Federal | 342 | 42.4 | na | na |
| Nonfederal[b] | 392 | 48.6 | na | na |
| Personal resources | 15 | 1.9 | na | na |
| Unknown or not stated | 57 | 7.1 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 75 | 9.3 | na | na |
| Research grants | 528 | 65.5 | na | na |
| Traineeships | 34 | 4.2 | na | na |
| Other types of support | 169 | 21.0 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 658 | 81.6 | 445 | 76.5 |
| Professional degree | 4 | 0.5 | 17 | 2.9 |
| Dual degree | 4 | 0.5 | 8 | 1.4 |
| Doctoral degree type unknown | 140 | 17.4 | 112 | 19.2 |
| Degree origin | | | | |
| United States | 366 | 45.4 | na | na |
| Foreign country | 155 | 19.2 | na | na |
| Unknown | 285 | 35.4 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-13a

## Physical sciences master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 330 | 46.2 | 307 | 43.0 | 228 | 31.9 |
| Schools | 337 | 41.7 | 313 | 38.7 | 231 | 28.6 |
| Units | 786 | 3.9 | 575 | 2.8 | 554 | 2.7 |
| All graduate students | 42,867 | 100.0 | 6,361 | 100.0 | 36,506 | 100.0 |
| Male | 28,021 | 65.4 | 3,914 | 61.5 | 24,107 | 66.0 |
| Female | 14,846 | 34.6 | 2,447 | 38.5 | 12,399 | 34.0 |
| U.S. citizens and permanent residents[a] | 26,087 | 60.9 | 4,658 | 73.2 | 21,429 | 58.7 |
| Hispanic or Latino | 2,792 | 6.5 | 698 | 11.0 | 2,094 | 5.7 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 89 | 0.2 | 26 | 0.4 | 63 | 0.2 |
| Asian | 2,400 | 5.6 | 439 | 6.9 | 1,961 | 5.4 |
| Black or African American | 1,063 | 2.5 | 335 | 5.3 | 728 | 2.0 |
| Native Hawaiian or Other Pacific Islander | 21 | * | 6 | 0.1 | 15 | * |
| White | 17,826 | 41.6 | 2,799 | 44.0 | 15,027 | 41.2 |
| More than one race | 875 | 2.0 | 165 | 2.6 | 710 | 1.9 |
| Unknown ethnicity and race | 1,021 | 2.4 | 190 | 3.0 | 831 | 2.3 |
| Temporary visa holders | 16,780 | 39.1 | 1,703 | 26.8 | 15,077 | 41.3 |
| Part time | 4,705 | 11.0 | 2,483 | 39.0 | 2,222 | 6.1 |
| Full time | 38,162 | 89.0 | 3,878 | 61.0 | 34,284 | 93.9 |
| First time | 8,308 | 19.4 | 1,627 | 25.6 | 6,681 | 18.3 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 10,530 | 24.6 | 307 | 4.8 | 10,223 | 28.0 |
| DOD | 813 | 1.9 | 31 | 0.5 | 782 | 2.1 |
| DOE | 2,039 | 4.8 | 17 | 0.3 | 2,022 | 5.5 |
| HHS | 1,996 | 4.7 | 33 | 0.5 | 1,963 | 5.4 |
| NIH | 1,762 | 4.1 | 24 | 0.4 | 1,738 | 4.8 |
| Other HHS | 234 | 0.5 | 9 | 0.1 | 225 | 0.6 |
| NASA | 599 | 1.4 | 27 | 0.4 | 572 | 1.6 |
| NSF | 4,213 | 9.8 | 112 | 1.8 | 4,101 | 11.2 |
| USDA | 31 | 0.1 | 3 | * | 28 | 0.1 |
| Other | 839 | 2.0 | 84 | 1.3 | 755 | 2.1 |
| Nonfederal | 24,803 | 57.9 | 1,950 | 30.7 | 22,853 | 62.6 |
| Institutional | 22,916 | 53.5 | 1,813 | 28.5 | 21,103 | 57.8 |
| Domestic | 1,560 | 3.6 | 87 | 1.4 | 1,473 | 4.0 |
| Foreign | 327 | 0.8 | 50 | 0.8 | 277 | 0.8 |
| Self-support | 2,829 | 6.6 | 1,621 | 25.5 | 1,208 | 3.3 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 4,356 | 10.2 | 105 | 1.7 | 4,251 | 11.6 |
| Research assistantships | 14,426 | 33.7 | 551 | 8.7 | 13,875 | 38.0 |
| Teaching assistantships | 14,342 | 33.5 | 1,213 | 19.1 | 13,129 | 36.0 |
| Traineeships | 628 | 1.5 | 61 | 1.0 | 567 | 1.6 |
| Other types of support | 4,410 | 10.3 | 1,948 | 30.6 | 2,462 | 6.7 |
| Self-support | 2,829 | 6.6 | 1,621 | 25.5 | 1,208 | 3.3 |
| Other | 1,581 | 3.7 | 327 | 5.1 | 1,254 | 3.4 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-13b

## Physical sciences postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 225 | 31.5 | 165 | 23.1 |
| Schools | 230 | 28.4 | 168 | 20.8 |
| Units | 556 | 2.7 | 391 | 1.9 |
| All individuals | 7,159 | 100.0 | 3,316 | 100.0 |
| Male | 5,462 | 76.3 | 2,644 | 79.7 |
| Female | 1,697 | 23.7 | 672 | 20.3 |
| U.S. citizens and permanent residents[a] | 2,639 | 36.9 | na | na |
| Hispanic or Latino | 131 | 1.8 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 4 | 0.1 | na | na |
| Asian | 523 | 7.3 | na | na |
| Black or African American | 48 | 0.7 | na | na |
| Native Hawaiian or Other Pacific Islander | 1 | * | na | na |
| White | 1,550 | 21.7 | na | na |
| More than one race | 50 | 0.7 | na | na |
| Unknown ethnicity and race | 332 | 4.6 | na | na |
| Temporary visa holders | 4,520 | 63.1 | na | na |
| Primary source of support | | | | |
| Federal | 3,946 | 55.1 | na | na |
| Nonfederal[b] | 2,714 | 37.9 | na | na |
| Personal resources | 69 | 1.0 | na | na |
| Unknown or not stated | 430 | 6.0 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 806 | 11.3 | na | na |
| Research grants | 4,987 | 69.7 | na | na |
| Traineeships | 96 | 1.3 | na | na |
| Other types of support | 1,270 | 17.7 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 5,751 | 80.3 | 2,822 | 85.1 |
| Professional degree | 33 | 0.5 | 23 | 0.7 |
| Dual degree | 152 | 2.1 | 16 | 0.5 |
| Doctoral degree type unknown | 1,223 | 17.1 | 455 | 13.7 |
| Degree origin | | | | |
| United States | 2,378 | 33.2 | na | na |
| Foreign country | 2,118 | 29.6 | na | na |
| Unknown | 2,663 | 37.2 | na | na |

* = value < 0.05%. na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-14a

## Psychology master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 467 | 65.4 | 405 | 56.7 | 240 | 33.6 |
| Schools | 477 | 59.0 | 411 | 50.8 | 246 | 30.4 |
| Units | 1,029 | 5.1 | 735 | 3.6 | 465 | 2.3 |
| All graduate students | 61,069 | 100.0 | 40,838 | 100.0 | 20,231 | 100.0 |
| Male | 13,523 | 22.1 | 8,057 | 19.7 | 5,466 | 27.0 |
| Female | 47,546 | 77.9 | 32,781 | 80.3 | 14,765 | 73.0 |
| U.S. citizens and permanent residents[a] | 57,444 | 94.1 | 39,230 | 96.1 | 18,214 | 90.0 |
| Hispanic or Latino | 9,931 | 16.3 | 7,361 | 18.0 | 2,570 | 12.7 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 276 | 0.5 | 181 | 0.4 | 95 | 0.5 |
| Asian | 3,016 | 4.9 | 1,795 | 4.4 | 1,221 | 6.0 |
| Black or African American | 6,184 | 10.1 | 4,709 | 11.5 | 1,475 | 7.3 |
| Native Hawaiian or Other Pacific Islander | 111 | 0.2 | 87 | 0.2 | 24 | 0.1 |
| White | 32,160 | 52.7 | 20,798 | 50.9 | 11,362 | 56.2 |
| More than one race | 2,117 | 3.5 | 1,336 | 3.3 | 781 | 3.9 |
| Unknown ethnicity and race | 3,649 | 6.0 | 2,963 | 7.3 | 686 | 3.4 |
| Temporary visa holders | 3,625 | 5.9 | 1,608 | 3.9 | 2,017 | 10.0 |
| Part time | 19,976 | 32.7 | 16,291 | 39.9 | 3,685 | 18.2 |
| Full time | 41,093 | 67.3 | 24,547 | 60.1 | 16,546 | 81.8 |
| First time | 13,001 | 21.3 | 9,668 | 23.7 | 3,333 | 16.5 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 2,469 | 4.0 | 628 | 1.5 | 1,841 | 9.1 |
| DOD | 175 | 0.3 | 48 | 0.1 | 127 | 0.6 |
| DOE | 9 | * | 3 | * | 6 | * |
| HHS | 985 | 1.6 | 67 | 0.2 | 918 | 4.5 |
| NIH | 810 | 1.3 | 32 | 0.1 | 778 | 3.8 |
| Other HHS | 175 | 0.3 | 35 | 0.1 | 140 | 0.7 |
| NASA | 3 | * | 0 | 0.0 | 3 | * |
| NSF | 432 | 0.7 | 30 | 0.1 | 402 | 2.0 |
| USDA | 5 | * | 2 | * | 3 | * |
| Other | 860 | 1.4 | 478 | 1.2 | 382 | 1.9 |
| Nonfederal | 14,841 | 24.3 | 3,812 | 9.3 | 11,029 | 54.5 |
| Institutional | 13,950 | 22.8 | 3,600 | 8.8 | 10,350 | 51.2 |
| Domestic | 748 | 1.2 | 131 | 0.3 | 617 | 3.0 |
| Foreign | 143 | 0.2 | 81 | 0.2 | 62 | 0.3 |
| Self-support | 23,783 | 38.9 | 20,107 | 49.2 | 3,676 | 18.2 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 2,001 | 3.3 | 106 | 0.3 | 1,895 | 9.4 |
| Research assistantships | 4,680 | 7.7 | 984 | 2.4 | 3,696 | 18.3 |
| Teaching assistantships | 6,353 | 10.4 | 1,173 | 2.9 | 5,180 | 25.6 |
| Traineeships | 938 | 1.5 | 298 | 0.7 | 640 | 3.2 |
| Other types of support | 27,121 | 44.4 | 21,986 | 53.8 | 5,135 | 25.4 |
| Self-support | 23,783 | 38.9 | 20,107 | 49.2 | 3,676 | 18.2 |
| Other | 3,338 | 5.5 | 1,879 | 4.6 | 1,459 | 7.2 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-14b

## Psychology postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 145 | 20.3 | 92 | 12.9 |
| Schools | 154 | 19.0 | 94 | 11.6 |
| Units | 214 | 1.1 | 129 | 0.6 |
| All individuals | 1,152 | 100.0 | 576 | 100.0 |
| Male | 474 | 41.1 | 224 | 38.9 |
| Female | 678 | 58.9 | 352 | 61.1 |
| U.S. citizens and permanent residents[a] | 820 | 71.2 | na | na |
| Hispanic or Latino | 65 | 5.6 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 0 | 0.0 | na | na |
| Asian | 86 | 7.5 | na | na |
| Black or African American | 15 | 1.3 | na | na |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0 | na | na |
| White | 550 | 47.7 | na | na |
| More than one race | 10 | 0.9 | na | na |
| Unknown ethnicity and race | 94 | 8.2 | na | na |
| Temporary visa holders | 332 | 28.8 | na | na |
| Primary source of support | | | | |
| Federal | 605 | 52.5 | na | na |
| Nonfederal[b] | 433 | 37.6 | na | na |
| Personal resources | 26 | 2.3 | na | na |
| Unknown or not stated | 88 | 7.6 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 176 | 15.3 | na | na |
| Research grants | 685 | 59.5 | na | na |
| Traineeships | 59 | 5.1 | na | na |
| Other types of support | 232 | 20.1 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 913 | 79.3 | 403 | 70.0 |
| Professional degree | 26 | 2.3 | 17 | 3.0 |
| Dual degree | 27 | 2.3 | 4 | 0.7 |
| Doctoral degree type unknown | 186 | 16.1 | 152 | 26.4 |
| Degree origin | | | | |
| United States | 617 | 53.6 | na | na |
| Foreign country | 208 | 18.1 | na | na |
| Unknown | 327 | 28.4 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-15a

## Social sciences master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 415 | 58.1 | 403 | 56.4 | 210 | 29.4 |
| Schools | 428 | 52.9 | 416 | 51.4 | 216 | 26.7 |
| Units | 2,097 | 10.4 | 1,677 | 8.3 | 978 | 4.8 |
| All graduate students | 78,999 | 100.0 | 43,607 | 100.0 | 35,392 | 100.0 |
| Male | 36,154 | 45.8 | 19,156 | 43.9 | 16,998 | 48.0 |
| Female | 42,845 | 54.2 | 24,451 | 56.1 | 18,394 | 52.0 |
| U.S. citizens and permanent residents[a] | 58,254 | 73.7 | 35,472 | 81.3 | 22,782 | 64.4 |
| Hispanic or Latino | 7,696 | 9.7 | 5,187 | 11.9 | 2,509 | 7.1 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 479 | 0.6 | 273 | 0.6 | 206 | 0.6 |
| Asian | 3,631 | 4.6 | 1,996 | 4.6 | 1,635 | 4.6 |
| Black or African American | 6,231 | 7.9 | 4,206 | 9.6 | 2,025 | 5.7 |
| Native Hawaiian or Other Pacific Islander | 119 | 0.2 | 79 | 0.2 | 40 | 0.1 |
| White | 34,787 | 44.0 | 20,512 | 47.0 | 14,275 | 40.3 |
| More than one race | 2,054 | 2.6 | 1,250 | 2.9 | 804 | 2.3 |
| Unknown ethnicity and race | 3,257 | 4.1 | 1,969 | 4.5 | 1,288 | 3.6 |
| Temporary visa holders | 20,745 | 26.3 | 8,135 | 18.7 | 12,610 | 35.6 |
| Part time | 22,019 | 27.9 | 17,003 | 39.0 | 5,016 | 14.2 |
| Full time | 56,980 | 72.1 | 26,604 | 61.0 | 30,376 | 85.8 |
| First time | 18,394 | 23.3 | 13,053 | 29.9 | 5,341 | 15.1 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 2,815 | 3.6 | 1,178 | 2.7 | 1,637 | 4.6 |
| DOD | 520 | 0.7 | 456 | 1.0 | 64 | 0.2 |
| DOE | 15 | * | 1 | * | 14 | * |
| HHS | 296 | 0.4 | 30 | 0.1 | 266 | 0.8 |
| NIH | 222 | 0.3 | 15 | * | 207 | 0.6 |
| Other HHS | 74 | 0.1 | 15 | * | 59 | 0.2 |
| NASA | 38 | * | 10 | * | 28 | 0.1 |
| NSF | 706 | 0.9 | 77 | 0.2 | 629 | 1.8 |
| USDA | 242 | 0.3 | 89 | 0.2 | 153 | 0.4 |
| Other | 998 | 1.3 | 515 | 1.2 | 483 | 1.4 |
| Nonfederal | 35,074 | 44.4 | 10,222 | 23.4 | 24,852 | 70.2 |
| Institutional | 33,263 | 42.1 | 9,528 | 21.8 | 23,735 | 67.1 |
| Domestic | 1,403 | 1.8 | 516 | 1.2 | 887 | 2.5 |
| Foreign | 408 | 0.5 | 178 | 0.4 | 230 | 0.6 |
| Self-support | 19,091 | 24.2 | 15,204 | 34.9 | 3,887 | 11.0 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 9,442 | 12.0 | 2,394 | 5.5 | 7,048 | 19.9 |
| Research assistantships | 6,308 | 8.0 | 1,924 | 4.4 | 4,384 | 12.4 |
| Teaching assistantships | 15,224 | 19.3 | 2,967 | 6.8 | 12,257 | 34.6 |
| Traineeships | 909 | 1.2 | 278 | 0.6 | 631 | 1.8 |
| Other types of support | 25,097 | 31.8 | 19,041 | 43.7 | 6,056 | 17.1 |
| Self-support | 19,091 | 24.2 | 15,204 | 34.9 | 3,887 | 11.0 |
| Other | 6,006 | 7.6 | 3,837 | 8.8 | 2,169 | 6.1 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-15b

## Social sciences postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 151 | 21.1 | 134 | 18.8 |
| Schools | 160 | 19.8 | 137 | 16.9 |
| Units | 637 | 3.1 | 464 | 2.3 |
| All individuals | 1,762 | 100.0 | 1,659 | 100.0 |
| Male | 831 | 47.2 | 699 | 42.1 |
| Female | 931 | 52.8 | 960 | 57.9 |
| U.S. citizens and permanent residents[a] | 1,199 | 68.0 | na | na |
| Hispanic or Latino | 83 | 4.7 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 4 | 0.2 | na | na |
| Asian | 108 | 6.1 | na | na |
| Black or African American | 80 | 4.5 | na | na |
| Native Hawaiian or Other Pacific Islander | 10 | 0.6 | na | na |
| White | 728 | 41.3 | na | na |
| More than one race | 34 | 1.9 | na | na |
| Unknown ethnicity and race | 152 | 8.6 | na | na |
| Temporary visa holders | 563 | 32.0 | na | na |
| Primary source of support | | | | |
| Federal | 385 | 21.9 | na | na |
| Nonfederal[b] | 1,135 | 64.4 | na | na |
| Personal resources | 16 | 0.9 | na | na |
| Unknown or not stated | 226 | 12.8 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 284 | 16.1 | na | na |
| Research grants | 831 | 47.2 | na | na |
| Traineeships | 74 | 4.2 | na | na |
| Other types of support | 573 | 32.5 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 1,384 | 78.5 | 1,281 | 77.2 |
| Professional degree | 21 | 1.2 | 97 | 5.8 |
| Dual degree | 35 | 2.0 | 14 | 0.8 |
| Doctoral degree type unknown | 322 | 18.3 | 267 | 16.1 |
| Degree origin | | | | |
| United States | 969 | 55.0 | na | na |
| Foreign country | 262 | 14.9 | na | na |
| Unknown | 531 | 30.1 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-16a

## Engineering master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 325 | 45.5 | 318 | 44.5 | 226 | 31.7 |
| Schools | 338 | 41.8 | 327 | 40.4 | 234 | 28.9 |
| Units | 2,272 | 11.2 | 2,051 | 10.1 | 1,354 | 6.7 |
| All graduate students | 164,004 | 100.0 | 91,939 | 100.0 | 72,065 | 100.0 |
| Male | 120,821 | 73.7 | 68,076 | 74.0 | 52,745 | 73.2 |
| Female | 43,183 | 26.3 | 23,863 | 26.0 | 19,320 | 26.8 |
| U.S. citizens and permanent residents[a] | 79,982 | 48.8 | 49,873 | 54.2 | 30,109 | 41.8 |
| Hispanic or Latino | 8,643 | 5.3 | 5,846 | 6.4 | 2,797 | 3.9 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 242 | 0.1 | 168 | 0.2 | 74 | 0.1 |
| Asian | 11,390 | 6.9 | 7,009 | 7.6 | 4,381 | 6.1 |
| Black or African American | 4,220 | 2.6 | 2,708 | 2.9 | 1,512 | 2.1 |
| Native Hawaiian or Other Pacific Islander | 95 | 0.1 | 69 | 0.1 | 26 | * |
| White | 48,892 | 29.8 | 30,121 | 32.8 | 18,771 | 26.0 |
| More than one race | 2,773 | 1.7 | 1,672 | 1.8 | 1,101 | 1.5 |
| Unknown ethnicity and race | 3,727 | 2.3 | 2,280 | 2.5 | 1,447 | 2.0 |
| Temporary visa holders | 84,022 | 51.2 | 42,066 | 45.8 | 41,956 | 58.2 |
| Part time | 42,887 | 26.1 | 34,216 | 37.2 | 8,671 | 12.0 |
| Full time | 121,117 | 73.9 | 57,723 | 62.8 | 63,394 | 88.0 |
| First time | 38,631 | 23.6 | 27,307 | 29.7 | 11,324 | 15.7 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 24,012 | 14.6 | 3,762 | 4.1 | 20,250 | 28.1 |
| DOD | 5,030 | 3.1 | 1,389 | 1.5 | 3,641 | 5.1 |
| DOE | 2,581 | 1.6 | 360 | 0.4 | 2,221 | 3.1 |
| HHS | 3,655 | 2.2 | 257 | 0.3 | 3,398 | 4.7 |
| NIH | 3,000 | 1.8 | 145 | 0.2 | 2,855 | 4.0 |
| Other HHS | 655 | 0.4 | 112 | 0.1 | 543 | 0.8 |
| NASA | 804 | 0.5 | 159 | 0.2 | 645 | 0.9 |
| NSF | 8,401 | 5.1 | 769 | 0.8 | 7,632 | 10.6 |
| USDA | 339 | 0.2 | 90 | 0.1 | 249 | 0.3 |
| Other | 3,202 | 2.0 | 738 | 0.8 | 2,464 | 3.4 |
| Nonfederal | 53,305 | 32.5 | 15,144 | 16.5 | 38,161 | 53.0 |
| Institutional | 43,902 | 26.8 | 12,920 | 14.1 | 30,982 | 43.0 |
| Domestic | 7,407 | 4.5 | 1,722 | 1.9 | 5,685 | 7.9 |
| Foreign | 1,996 | 1.2 | 502 | 0.5 | 1,494 | 2.1 |
| Self-support | 43,800 | 26.7 | 38,817 | 42.2 | 4,983 | 6.9 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 10,398 | 6.3 | 1,776 | 1.9 | 8,622 | 12.0 |
| Research assistantships | 39,957 | 24.4 | 6,236 | 6.8 | 33,721 | 46.8 |
| Teaching assistantships | 15,203 | 9.3 | 4,838 | 5.3 | 10,365 | 14.4 |
| Traineeships | 1,470 | 0.9 | 426 | 0.5 | 1,044 | 1.4 |
| Other types of support | 54,089 | 33.0 | 44,447 | 48.3 | 9,642 | 13.4 |
| Self-support | 43,800 | 26.7 | 38,817 | 42.2 | 4,983 | 6.9 |
| Other | 10,289 | 6.3 | 5,630 | 6.1 | 4,659 | 6.5 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-16b

## Engineering postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 201 | 28.2 | 169 | 23.7 |
| Schools | 215 | 26.6 | 177 | 21.9 |
| Units | 1,051 | 5.2 | 822 | 4.1 |
| All individuals | 8,266 | 100.0 | 3,909 | 100.0 |
| Male | 6,282 | 76.0 | 2,990 | 76.5 |
| Female | 1,984 | 24.0 | 919 | 23.5 |
| U.S. citizens and permanent residents[a] | 2,689 | 32.5 | na | na |
| Hispanic or Latino | 125 | 1.5 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 10 | 0.1 | na | na |
| Asian | 718 | 8.7 | na | na |
| Black or African American | 70 | 0.8 | na | na |
| Native Hawaiian or Other Pacific Islander | 1 | * | na | na |
| White | 1,415 | 17.1 | na | na |
| More than one race | 36 | 0.4 | na | na |
| Unknown ethnicity and race | 314 | 3.8 | na | na |
| Temporary visa holders | 5,577 | 67.5 | na | na |
| Primary source of support | | | | |
| Federal | 3,911 | 47.3 | na | na |
| Nonfederal[b] | 3,710 | 44.9 | na | na |
| Personal resources | 78 | 0.9 | na | na |
| Unknown or not stated | 567 | 6.9 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 791 | 9.6 | na | na |
| Research grants | 5,939 | 71.8 | na | na |
| Traineeships | 95 | 1.1 | na | na |
| Other types of support | 1,441 | 17.4 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 6,662 | 80.6 | 3,205 | 82.0 |
| Professional degree | 71 | 0.9 | 115 | 2.9 |
| Dual degree | 54 | 0.7 | 34 | 0.9 |
| Doctoral degree type unknown | 1,479 | 17.9 | 555 | 14.2 |
| Degree origin | | | | |
| United States | 3,164 | 38.3 | na | na |
| Foreign country | 2,141 | 25.9 | na | na |
| Unknown | 2,961 | 35.8 | na | na |

* = value < 0.05%. na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-17a

## Clinical medicine master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 252 | 35.3 | 248 | 34.7 | 106 | 14.8 |
| Schools | 266 | 32.9 | 260 | 32.1 | 115 | 14.2 |
| Units | 499 | 2.5 | 442 | 2.2 | 185 | 0.9 |
| All graduate students | 30,822 | 100.0 | 26,251 | 100.0 | 4,571 | 100.0 |
| Male | 7,666 | 24.9 | 6,296 | 24.0 | 1,370 | 30.0 |
| Female | 23,156 | 75.1 | 19,955 | 76.0 | 3,201 | 70.0 |
| U.S. citizens and permanent residents[a] | 27,556 | 89.4 | 23,932 | 91.2 | 3,624 | 79.3 |
| Hispanic or Latino | 3,433 | 11.1 | 3,004 | 11.4 | 429 | 9.4 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 177 | 0.6 | 156 | 0.6 | 21 | 0.5 |
| Asian | 3,119 | 10.1 | 2,743 | 10.4 | 376 | 8.2 |
| Black or African American | 4,393 | 14.3 | 3,799 | 14.5 | 594 | 13.0 |
| Native Hawaiian or Other Pacific Islander | 56 | 0.2 | 46 | 0.2 | 10 | 0.2 |
| White | 13,614 | 44.2 | 11,703 | 44.6 | 1,911 | 41.8 |
| More than one race | 971 | 3.2 | 842 | 3.2 | 129 | 2.8 |
| Unknown ethnicity and race | 1,793 | 5.8 | 1,639 | 6.2 | 154 | 3.4 |
| Temporary visa holders | 3,266 | 10.6 | 2,319 | 8.8 | 947 | 20.7 |
| Part time | 11,898 | 38.6 | 10,613 | 40.4 | 1,285 | 28.1 |
| Full time | 18,924 | 61.4 | 15,638 | 59.6 | 3,286 | 71.9 |
| First time | 7,684 | 24.9 | 7,046 | 26.8 | 638 | 14.0 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 1,265 | 4.1 | 590 | 2.2 | 675 | 14.8 |
| DOD | 15 | * | 7 | * | 8 | 0.2 |
| DOE | 4 | * | 1 | * | 3 | 0.1 |
| HHS | 836 | 2.7 | 318 | 1.2 | 518 | 11.3 |
| NIH | 592 | 1.9 | 205 | 0.8 | 387 | 8.5 |
| Other HHS | 244 | 0.8 | 113 | 0.4 | 131 | 2.9 |
| NASA | 1 | * | 0 | 0.0 | 1 | * |
| NSF | 41 | 0.1 | 7 | * | 34 | 0.7 |
| USDA | 15 | * | 7 | * | 8 | 0.2 |
| Other | 353 | 1.1 | 250 | 1.0 | 103 | 2.3 |
| Nonfederal | 5,380 | 17.5 | 3,491 | 13.3 | 1,889 | 41.3 |
| Institutional | 4,737 | 15.4 | 3,087 | 11.8 | 1,650 | 36.1 |
| Domestic | 532 | 1.7 | 349 | 1.3 | 183 | 4.0 |
| Foreign | 111 | 0.4 | 55 | 0.2 | 56 | 1.2 |
| Self-support | 12,279 | 39.8 | 11,557 | 44.0 | 722 | 15.8 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 934 | 3.0 | 623 | 2.4 | 311 | 6.8 |
| Research assistantships | 1,919 | 6.2 | 829 | 3.2 | 1,090 | 23.8 |
| Teaching assistantships | 1,011 | 3.3 | 612 | 2.3 | 399 | 8.7 |
| Traineeships | 644 | 2.1 | 330 | 1.3 | 314 | 6.9 |
| Other types of support | 14,416 | 46.8 | 13,244 | 50.5 | 1,172 | 25.6 |
| Self-support | 12,279 | 39.8 | 11,557 | 44.0 | 722 | 15.8 |
| Other | 2,137 | 6.9 | 1,687 | 6.4 | 450 | 9.8 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**

Percentages may not add to total because of rounding. Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-17b

## Clinical medicine postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 125 | 17.5 | 105 | 14.7 |
| Schools | 154 | 19.0 | 124 | 15.3 |
| Units | 1,741 | 8.6 | 1,195 | 5.9 |
| All individuals | 16,650 | 100.0 | 6,273 | 100.0 |
| Male | 8,492 | 51.0 | 3,127 | 49.8 |
| Female | 8,158 | 49.0 | 3,146 | 50.2 |
| U.S. citizens and permanent residents[a] | 7,916 | 47.5 | na | na |
| Hispanic or Latino | 580 | 3.5 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 16 | 0.1 | na | na |
| Asian | 1,853 | 11.1 | na | na |
| Black or African American | 407 | 2.4 | na | na |
| Native Hawaiian or Other Pacific Islander | 20 | 0.1 | na | na |
| White | 4,241 | 25.5 | na | na |
| More than one race | 142 | 0.9 | na | na |
| Unknown ethnicity and race | 657 | 3.9 | na | na |
| Temporary visa holders | 8,734 | 52.5 | na | na |
| Primary source of support | | | | |
| Federal | 7,502 | 45.1 | na | na |
| Nonfederal[b] | 7,063 | 42.4 | na | na |
| Personal resources | 460 | 2.8 | na | na |
| Unknown or not stated | 1,625 | 9.8 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 2,106 | 12.6 | na | na |
| Research grants | 7,746 | 46.5 | na | na |
| Traineeships | 1,651 | 9.9 | na | na |
| Other types of support | 5,147 | 30.9 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 10,641 | 63.9 | 3,561 | 56.8 |
| Professional degree | 3,069 | 18.4 | 877 | 14.0 |
| Dual degree | 841 | 5.1 | 223 | 3.6 |
| Doctoral degree type unknown | 2,099 | 12.6 | 1,612 | 25.7 |
| Degree origin | | | | |
| United States | 5,462 | 32.8 | na | na |
| Foreign country | 6,139 | 36.9 | na | na |
| Unknown | 5,049 | 30.3 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding. Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine not elsewhere classified.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-18a

## Other health master's and doctoral student demographics, enrollment status, and funding: 2019

(Number and percent)

| Characteristic | All graduate students | | Master's students | | Doctoral students | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Institutions | 383 | 53.6 | 346 | 48.5 | 200 | 28.0 |
| Schools | 410 | 50.7 | 365 | 45.1 | 215 | 26.6 |
| Units | 927 | 4.6 | 669 | 3.3 | 448 | 2.2 |
| All graduate students | 41,600 | 100.0 | 30,243 | 100.0 | 11,357 | 100.0 |
| Male | 9,604 | 23.1 | 5,871 | 19.4 | 3,733 | 32.9 |
| Female | 31,996 | 76.9 | 24,372 | 80.6 | 7,624 | 67.1 |
| U.S. citizens and permanent residents[a] | 36,598 | 88.0 | 28,187 | 93.2 | 8,411 | 74.1 |
| Hispanic or Latino | 4,198 | 10.1 | 3,597 | 11.9 | 601 | 5.3 |
| Not Hispanic or Latino | | | | | | |
| American Indian or Alaska Native | 132 | 0.3 | 101 | 0.3 | 31 | 0.3 |
| Asian | 2,853 | 6.9 | 2,020 | 6.7 | 833 | 7.3 |
| Black or African American | 2,985 | 7.2 | 2,095 | 6.9 | 890 | 7.8 |
| Native Hawaiian or Other Pacific Islander | 51 | 0.1 | 45 | 0.1 | 6 | 0.1 |
| White | 23,634 | 56.8 | 18,250 | 60.3 | 5,384 | 47.4 |
| More than one race | 967 | 2.3 | 740 | 2.4 | 227 | 2.0 |
| Unknown ethnicity and race | 1,778 | 4.3 | 1,339 | 4.4 | 439 | 3.9 |
| Temporary visa holders | 5,002 | 12.0 | 2,056 | 6.8 | 2,946 | 25.9 |
| Part time | 10,872 | 26.1 | 7,776 | 25.7 | 3,096 | 27.3 |
| Full time | 30,728 | 73.9 | 22,467 | 74.3 | 8,261 | 72.7 |
| First time | 11,192 | 26.9 | 9,529 | 31.5 | 1,663 | 14.6 |
| Primary source of support for full-time students[b] | | | | | | |
| Federal | 1,878 | 4.5 | 671 | 2.2 | 1,207 | 10.6 |
| DOD | 58 | 0.1 | 17 | 0.1 | 41 | 0.4 |
| DOE | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| HHS | 1,055 | 2.5 | 131 | 0.4 | 924 | 8.1 |
| NIH | 947 | 2.3 | 111 | 0.4 | 836 | 7.4 |
| Other HHS | 108 | 0.3 | 20 | 0.1 | 88 | 0.8 |
| NASA | 2 | * | 0 | 0.0 | 2 | * |
| NSF | 137 | 0.3 | 54 | 0.2 | 83 | 0.7 |
| USDA | 58 | 0.1 | 15 | * | 43 | 0.4 |
| Other | 568 | 1.4 | 454 | 1.5 | 114 | 1.0 |
| Nonfederal | 9,720 | 23.4 | 5,064 | 16.7 | 4,656 | 41.0 |
| Institutional | 8,764 | 21.1 | 4,639 | 15.3 | 4,125 | 36.3 |
| Domestic | 662 | 1.6 | 309 | 1.0 | 353 | 3.1 |
| Foreign | 294 | 0.7 | 116 | 0.4 | 178 | 1.6 |
| Self-support | 19,130 | 46.0 | 16,732 | 55.3 | 2,398 | 21.1 |
| Primary mechanism of support for full-time students[b] | | | | | | |
| Fellowships | 1,116 | 2.7 | 254 | 0.8 | 862 | 7.6 |
| Research assistantships | 3,339 | 8.0 | 1,133 | 3.7 | 2,206 | 19.4 |
| Teaching assistantships | 3,003 | 7.2 | 1,418 | 4.7 | 1,585 | 14.0 |
| Traineeships | 673 | 1.6 | 326 | 1.1 | 347 | 3.1 |
| Other types of support | 22,597 | 54.3 | 19,336 | 63.9 | 3,261 | 28.7 |
| Self-support | 19,130 | 46.0 | 16,732 | 55.3 | 2,398 | 21.1 |
| Other | 3,467 | 8.3 | 2,604 | 8.6 | 863 | 7.6 |

* = value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Funding data are available only for full-time students.

**Note(s):**
Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 4-18b

## Other health postdoctoral appointee and doctorate-holding nonfaculty researcher demographics and funding: 2019

(Number and percent)

| Characteristic | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Institutions | 137 | 19.2 | 110 | 15.4 |
| Schools | 158 | 19.5 | 125 | 15.5 |
| Units | 454 | 2.2 | 334 | 1.6 |
| All individuals | 2,828 | 100.0 | 1,348 | 100.0 |
| Male | 1,330 | 47.0 | 610 | 45.3 |
| Female | 1,498 | 53.0 | 738 | 54.7 |
| U.S. citizens and permanent residents[a] | 1,503 | 53.1 | na | na |
| Hispanic or Latino | 96 | 3.4 | na | na |
| Not Hispanic or Latino | | | | |
| American Indian or Alaska Native | 3 | 0.1 | na | na |
| Asian | 291 | 10.3 | na | na |
| Black or African American | 74 | 2.6 | na | na |
| Native Hawaiian or Other Pacific Islander | 3 | 0.1 | na | na |
| White | 859 | 30.4 | na | na |
| More than one race | 26 | 0.9 | na | na |
| Unknown ethnicity and race | 151 | 5.3 | na | na |
| Temporary visa holders | 1,325 | 46.9 | na | na |
| Primary source of support | | | | |
| Federal | 1,305 | 46.1 | na | na |
| Nonfederal[b] | 1,247 | 44.1 | na | na |
| Personal resources | 9 | 0.3 | na | na |
| Unknown or not stated | 267 | 9.4 | na | na |
| Primary mechanism of support | | | | |
| Fellowships | 306 | 10.8 | na | na |
| Research grants | 1,491 | 52.7 | na | na |
| Traineeships | 287 | 10.1 | na | na |
| Other types of support | 744 | 26.3 | na | na |
| Degree type[c] | | | | |
| Doctoral degree | 1,861 | 65.8 | 833 | 61.8 |
| Professional degree | 333 | 11.8 | 155 | 11.5 |
| Dual degree | 79 | 2.8 | 19 | 1.4 |
| Doctoral degree type unknown | 555 | 19.6 | 341 | 25.3 |
| Degree origin | | | | |
| United States | 1,014 | 35.9 | na | na |
| Foreign country | 736 | 26.0 | na | na |
| Unknown | 1,078 | 38.1 | na | na |

na = not applicable; citizenship, race and ethnicity, source of support, mechanism of support, and degree origin data are not collected for doctorate-holding nonfaculty researchers.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Nonfederal includes foreign support.

[c] Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Note(s):**

"Field" refers to the field of the unit that reports postdoctorates and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 5-1

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields, by institutional control: 2019

(Number and percent)

| Broad field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent in public institutions | Total number | Percent in public institutions | Total number | Percent in public institutions | Total number | Percent in public institutions | Total number | Percent in public institutions |
| All broad fields | 690,117 | 67.0 | 408,228 | 64.2 | 281,889 | 71.1 | 66,247 | 52.9 | 30,349 | 65.4 |
| Science | 453,691 | 65.3 | 259,795 | 61.8 | 193,896 | 70.1 | 38,503 | 54.7 | 18,819 | 65.9 |
| Agricultural sciences | 9,518 | 95.1 | 5,629 | 95.2 | 3,889 | 94.9 | 1,079 | 94.1 | 645 | 94.1 |
| Biological and biomedical sciences | 91,993 | 62.4 | 38,078 | 59.1 | 53,915 | 64.8 | 21,847 | 48.3 | 8,229 | 58.0 |
| Computer and information sciences | 101,284 | 66.2 | 84,092 | 64.8 | 17,192 | 73.0 | 878 | 50.5 | 510 | 74.5 |
| Geosciences, atmospheric sciences, and ocean sciences | 11,878 | 83.9 | 5,327 | 90.6 | 6,551 | 78.5 | 1,778 | 68.6 | 2,177 | 86.1 |
| Mathematics and statistics | 33,159 | 66.8 | 19,594 | 60.2 | 13,565 | 76.4 | 1,070 | 65.7 | 305 | 61.3 |
| Multidisciplinary and interdisciplinary studies | 11,181 | 69.5 | 8,203 | 69.4 | 2,978 | 69.9 | 972 | 58.2 | 820 | 68.7 |
| Natural resources and conservation | 11,743 | 84.6 | 8,066 | 82.8 | 3,677 | 88.7 | 806 | 85.4 | 582 | 87.5 |
| Physical sciences | 42,867 | 72.7 | 6,361 | 73.5 | 36,506 | 72.5 | 7,159 | 60.0 | 3,316 | 62.9 |
| Psychology | 61,069 | 52.3 | 40,838 | 45.2 | 20,231 | 66.6 | 1,152 | 56.5 | 576 | 68.2 |
| Social sciences | 78,999 | 63.2 | 43,607 | 59.6 | 35,392 | 67.5 | 1,762 | 54.0 | 1,659 | 62.7 |
| Engineering | 164,004 | 70.4 | 91,939 | 68.5 | 72,065 | 72.9 | 8,266 | 59.4 | 3,909 | 72.2 |
| Health | 72,422 | 69.9 | 56,494 | 68.1 | 15,928 | 76.2 | 19,478 | 46.3 | 7,621 | 60.5 |
| Clinical medicine[a] | 30,822 | 62.8 | 26,251 | 60.9 | 4,571 | 73.8 | 16,650 | 39.9 | 6,273 | 55.8 |
| Other health | 41,600 | 75.2 | 30,243 | 74.4 | 11,357 | 77.2 | 2,828 | 84.0 | 1,348 | 82.4 |

[a] Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified (nec). Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 5-2

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health at HBCUs: 2019

(Number and percent)

| Sex, citizenship, ethnicity, race, and broad field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent in HBCUs | Total number | Percent in HBCUs | Total number | Percent in HBCUs | Total number | Percent in HBCUs | Total number | Percent in HBCUs |
| All individuals | 690,117 | 1.0 | 408,228 | 1.1 | 281,889 | 0.8 | 66,247 | 0.2 | 30,349 | 0.4 |
| Male | 364,995 | 0.7 | 205,768 | 0.8 | 159,227 | 0.6 | 39,173 | 0.2 | 17,980 | 0.4 |
| Female | 325,122 | 1.2 | 202,460 | 1.4 | 122,662 | 0.9 | 27,074 | 0.2 | 12,369 | 0.3 |
| U.S. citizens and permanent residents[a] | 456,504 | 1.2 | 287,370 | 1.4 | 169,134 | 1.0 | 29,452 | 0.2 | na | na |
| Hispanic or Latino | 54,467 | 0.4 | 36,777 | 0.4 | 17,690 | 0.3 | 1,924 | 0.1 | na | na |
| Not Hispanic or Latino | | | | | | | | | | |
| American Indian or Alaska Native | 2,077 | 1.1 | 1,327 | 1.1 | 750 | 0.9 | 69 | 0.0 | na | na |
| Asian | 48,844 | 0.5 | 31,301 | 0.5 | 17,543 | 0.7 | 5,891 | 0.3 | na | na |
| Black or African American | 38,048 | 10.4 | 27,598 | 10.3 | 10,450 | 10.7 | 1,088 | 2.9 | na | na |
| Native Hawaiian or Other Pacific Islander | 744 | 1.1 | 542 | 0.9 | 202 | 1.5 | 52 | 0.0 | na | na |
| White | 272,545 | 0.3 | 163,836 | 0.3 | 108,709 | 0.2 | 16,972 | 0.1 | na | na |
| More than one race | 15,613 | 0.8 | 9,593 | 0.8 | 6,020 | 0.7 | 519 | 0.0 | na | na |
| Unknown ethnicity and race | 24,166 | 1.0 | 16,396 | 1.1 | 7,770 | 0.7 | 2,937 | 0.2 | na | na |
| Temporary visa holders | 233,613 | 0.4 | 120,858 | 0.4 | 112,755 | 0.5 | 36,795 | 0.2 | na | na |
| Science | 453,691 | 1.0 | 259,795 | 1.2 | 193,896 | 0.7 | 38,503 | 0.3 | 18,819 | 0.5 |
| Agricultural sciences | 9,518 | 2.9 | 5,629 | 3.9 | 3,889 | 1.3 | 1,079 | 0.8 | 645 | 2.2 |
| Biological and biomedical sciences | 91,993 | 1.1 | 38,078 | 1.7 | 53,915 | 0.7 | 21,847 | 0.2 | 8,229 | 0.3 |
| Computer and information sciences | 101,284 | 0.8 | 84,092 | 0.8 | 17,192 | 0.8 | 878 | 0.1 | 510 | 0.4 |
| Geosciences, atmospheric sciences, and ocean sciences | 11,878 | 0.6 | 5,327 | 0.9 | 6,551 | 0.3 | 1,778 | 0.1 | 2,177 | 1.0 |
| Mathematics and statistics | 33,159 | 0.5 | 19,594 | 0.6 | 13,565 | 0.3 | 1,070 | 0.2 | 305 | 0.0 |
| Multidisciplinary and interdisciplinary studies | 11,181 | 0.3 | 8,203 | 0.2 | 2,978 | 0.4 | 972 | 0.5 | 820 | 0.0 |
| Natural resources and conservation | 11,743 | 1.5 | 8,066 | 0.9 | 3,677 | 2.9 | 806 | 2.6 | 582 | 2.6 |
| Physical sciences | 42,867 | 0.8 | 6,361 | 2.5 | 36,506 | 0.5 | 7,159 | 0.4 | 3,316 | 0.2 |
| Psychology | 61,069 | 1.2 | 40,838 | 1.4 | 20,231 | 0.8 | 1,152 | 0.0 | 576 | 0.0 |
| Social sciences | 78,999 | 1.1 | 43,607 | 1.3 | 35,392 | 0.8 | 1,762 | 0.0 | 1,659 | 0.4 |
| Engineering | 164,004 | 0.5 | 91,939 | 0.5 | 72,065 | 0.6 | 8,266 | 0.1 | 3,909 | 0.1 |
| Health | 72,422 | 1.7 | 56,494 | 1.6 | 15,928 | 2.1 | 19,478 | 0.1 | 7,621 | 0.2 |
| Clinical medicine[b] | 30,822 | 1.6 | 26,251 | 1.4 | 4,571 | 2.9 | 16,650 | * | 6,273 | 0.1 |
| Other health | 41,600 | 1.8 | 30,243 | 1.8 | 11,357 | 1.8 | 2,828 | 0.4 | 1,348 | 1.0 |
| Black or African American individuals | | | | | | | | | | |
| Male | 14,725 | 9.6 | 10,593 | 9.1 | 4,132 | 10.6 | 433 | 2.8 | na | na |
| Female | 23,323 | 11.0 | 17,005 | 11.0 | 6,318 | 10.8 | 655 | 3.1 | na | na |
| Science | 26,450 | 10.9 | 18,996 | 10.8 | 7,454 | 10.9 | 537 | 4.5 | na | na |
| Agricultural sciences | 329 | 43.5 | 227 | 51.1 | 102 | 26.5 | 13 | 0.0 | na | na |
| Biological and biomedical sciences | 5,270 | 11.6 | 3,210 | 13.4 | 2,060 | 8.9 | 307 | 2.6 | na | na |

TABLE 5-2

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health at HBCUs: 2019

(Number and percent)

| Sex, citizenship, ethnicity, race, and broad field | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Total number | Percent in HBCUs | Total number | Percent in HBCUs | Total number | Percent in HBCUs | Total number | Percent in HBCUs | Total number | Percent in HBCUs |
| Computer and information sciences | 5,247 | 8.6 | 4,803 | 8.2 | 444 | 12.6 | 7 | 0.0 | na | na |
| Geosciences, atmospheric sciences, and ocean sciences | 258 | 10.9 | 152 | 15.1 | 106 | 4.7 | 15 | 0.0 | na | na |
| Mathematics and statistics | 716 | 11.0 | 519 | 11.6 | 197 | 9.6 | 9 | 0.0 | na | na |
| Multidisciplinary and interdisciplinary studies | 788 | 1.8 | 619 | 1.3 | 169 | 3.6 | 23 | 4.3 | na | na |
| Natural resources and conservation | 364 | 27.5 | 216 | 12.0 | 148 | 50.0 | 20 | 65.0 | na | na |
| Physical sciences | 1,063 | 15.5 | 335 | 21.8 | 728 | 12.6 | 48 | 4.2 | na | na |
| Psychology | 6,184 | 9.4 | 4,709 | 9.9 | 1,475 | 7.7 | 15 | 0.0 | na | na |
| Social sciences | 6,231 | 11.3 | 4,206 | 11.0 | 2,025 | 11.9 | 80 | 0.0 | na | na |
| Engineering | 4,220 | 8.8 | 2,708 | 8.3 | 1,512 | 9.7 | 70 | 4.3 | na | na |
| Health | 7,378 | 9.8 | 5,894 | 9.5 | 1,484 | 10.8 | 481 | 1.0 | na | na |
| Clinical medicine[b] | 4,393 | 9.7 | 3,799 | 8.5 | 594 | 17.8 | 407 | 0.2 | na | na |
| Other health | 2,985 | 9.8 | 2,095 | 11.3 | 890 | 6.2 | 74 | 5.4 | na | na |

* = value < 0.05%; na = not applicable.

HBCU = historically Black college or university.

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified (nec). Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 5-3

## Graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health, by broad field and Carnegie classification: 2019

(Number and percent)

| 2018 Carnegie classification by area of study | Graduate students | | | | | | Postdoctoral appointees | | Doctorate-holding nonfaculty researchers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | All graduate students | | Master's | | Doctoral | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| All broad fields | 690,117 | 100.0 | 408,228 | 100.0 | 281,889 | 100.0 | 66,247 | 100.0 | 30,349 | 100.0 |
| Doctoral: highest research | 454,835 | 65.9 | 225,200 | 55.2 | 229,635 | 81.5 | 55,095 | 83.2 | 25,710 | 84.7 |
| Doctoral: higher research | 106,846 | 15.5 | 70,992 | 17.4 | 35,854 | 12.7 | 2,972 | 4.5 | 2,424 | 8.0 |
| Doctoral: moderate research | 38,743 | 5.6 | 34,335 | 8.4 | 4,408 | 1.6 | 157 | 0.2 | 2 | * |
| Master's: larger programs | 63,044 | 9.1 | 61,445 | 15.1 | 1,599 | 0.6 | 83 | 0.1 | 48 | 0.2 |
| Master's: medium programs | 4,739 | 0.7 | 4,253 | 1.0 | 486 | 0.2 | 31 | * | 87 | 0.3 |
| Master's: small programs and baccalaureate | 4,050 | 0.6 | 3,176 | 0.8 | 874 | 0.3 | 60 | 0.1 | 27 | 0.1 |
| Medical schools and centers | 15,877 | 2.3 | 7,988 | 2.0 | 7,889 | 2.8 | 6,679 | 10.1 | 1,722 | 5.7 |
| Other 4-year special focus | 880 | 0.1 | 591 | 0.1 | 289 | 0.1 | 6 | * | 17 | 0.1 |
| Not classified | 1,103 | 0.2 | 248 | 0.1 | 855 | 0.3 | 1,164 | 1.8 | 312 | 1.0 |
| Science | 453,691 | 100.0 | 259,795 | 100.0 | 193,896 | 100.0 | 38,503 | 100.0 | 18,819 | 100.0 |
| Doctoral: highest research | 290,886 | 64.1 | 134,065 | 51.6 | 156,821 | 80.9 | 31,562 | 82.0 | 15,754 | 83.7 |
| Doctoral: higher research | 69,361 | 15.3 | 44,904 | 17.3 | 24,457 | 12.6 | 2,134 | 5.5 | 1,666 | 8.9 |
| Doctoral: moderate research | 30,453 | 6.7 | 27,144 | 10.4 | 3,309 | 1.7 | 93 | 0.2 | 2 | * |
| Master's: larger programs | 44,890 | 9.9 | 43,829 | 16.9 | 1,061 | 0.5 | 71 | 0.2 | 40 | 0.2 |
| Master's: medium programs | 3,335 | 0.7 | 3,159 | 1.2 | 176 | 0.1 | 25 | 0.1 | 17 | 0.1 |
| Master's: small programs and baccalaureate | 2,897 | 0.6 | 2,362 | 0.9 | 535 | 0.3 | 58 | 0.2 | 25 | 0.1 |
| Medical schools and centers | 10,567 | 2.3 | 4,062 | 1.6 | 6,505 | 3.4 | 3,478 | 9.0 | 1,031 | 5.5 |
| Other 4-year special focus | 323 | 0.1 | 125 | * | 198 | 0.1 | 5 | * | 1 | * |
| Not classified | 979 | 0.2 | 145 | 0.1 | 834 | 0.4 | 1,077 | 2.8 | 283 | 1.5 |
| Engineering | 164,004 | 100.0 | 91,939 | 100.0 | 72,065 | 100.0 | 8,266 | 100.0 | 3,909 | 100.0 |
| Doctoral: highest research | 126,113 | 76.9 | 64,154 | 69.8 | 61,959 | 86.0 | 7,560 | 91.5 | 3,169 | 81.1 |
| Doctoral: higher research | 24,764 | 15.1 | 15,743 | 17.1 | 9,021 | 12.5 | 542 | 6.6 | 590 | 15.1 |
| Doctoral: moderate research | 2,074 | 1.3 | 1,897 | 2.1 | 177 | 0.2 | 18 | 0.2 | 0 | 0.0 |
| Master's: larger programs | 8,976 | 5.5 | 8,713 | 9.5 | 263 | 0.4 | 11 | 0.1 | 8 | 0.2 |
| Master's: medium programs | 656 | 0.4 | 485 | 0.5 | 171 | 0.2 | 5 | 0.1 | 70 | 1.8 |
| Master's: small programs and baccalaureate | 448 | 0.3 | 419 | 0.5 | 29 | * | 2 | * | 2 | 0.1 |
| Medical schools and centers | 414 | 0.3 | 60 | 0.1 | 354 | 0.5 | 118 | 1.4 | 37 | 0.9 |
| Other 4-year special focus | 557 | 0.3 | 466 | 0.5 | 91 | 0.1 | 1 | * | 16 | 0.4 |
| Not classified | 2 | * | 2 | * | 0 | 0.0 | 9 | 0.1 | 17 | 0.4 |
| Health | 72,422 | 100.0 | 56,494 | 100.0 | 15,928 | 100.0 | 19,478 | 100.0 | 7,621 | 100.0 |
| Doctoral: highest research | 37,836 | 52.2 | 26,981 | 47.8 | 10,855 | 68.2 | 15,973 | 82.0 | 6,787 | 89.1 |
| Doctoral: higher research | 12,721 | 17.6 | 10,345 | 18.3 | 2,376 | 14.9 | 296 | 1.5 | 168 | 2.2 |
| Doctoral: moderate research | 6,216 | 8.6 | 5,294 | 9.4 | 922 | 5.8 | 46 | 0.2 | 0 | 0.0 |
| Master's: larger programs | 9,178 | 12.7 | 8,903 | 15.8 | 275 | 1.7 | 1 | * | 0 | 0.0 |
| Master's: medium programs | 748 | 1.0 | 609 | 1.1 | 139 | 0.9 | 1 | * | 0 | 0.0 |
| Master's: small programs and baccalaureate | 705 | 1.0 | 395 | 0.7 | 310 | 1.9 | 0 | 0.0 | 0 | 0.0 |
| Medical schools and centers | 4,896 | 6.8 | 3,866 | 6.8 | 1,030 | 6.5 | 3,083 | 15.8 | 654 | 8.6 |
| Other 4-year special focus | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Not classified | 122 | 0.2 | 101 | 0.2 | 21 | 0.1 | 78 | 0.4 | 12 | 0.2 |

* = value < 0.05%.

**Note(s):**

Institutions are designated by 2018 Carnegie classification code. Percentages may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| All institutions[a] | - | 690,117 | 453,691 | 164,004 | 72,422 | - | 408,228 | 259,795 | 91,939 | 56,494 | - | 281,889 | 193,896 | 72,065 | 15,928 |
| Georgia Institute of Technology | 1 | 14,091 | 10,433 | 3,637 | 21 | 1 | 10,691 | 9,136 | 1,534 | 21 | 17 | 3,400 | 1,297 | 2,103 | 0 |
| Johns Hopkins U. | 2 | 11,402 | 6,795 | 3,024 | 1,583 | 2 | 8,420 | 4,890 | 2,304 | 1,226 | 23 | 2,982 | 1,905 | 720 | 357 |
| Columbia U. in the City of New York | 3 | 10,332 | 6,439 | 3,093 | 800 | 3 | 7,803 | 4,569 | 2,494 | 740 | 27 | 2,529 | 1,870 | 599 | 60 |
| U. Michigan | 4 | 9,890 | 5,038 | 4,271 | 581 | 8 | 5,303 | 2,329 | 2,595 | 379 | 1 | 4,587 | 2,709 | 1,676 | 202 |
| U. Southern California | 5 | 9,756 | 5,645 | 3,305 | 806 | 4 | 7,140 | 3,986 | 2,576 | 578 | 26 | 2,616 | 1,659 | 729 | 228 |
| U. Illinois, Urbana-Champaign | 6 | 8,650 | 5,671 | 2,725 | 254 | 10 | 4,531 | 3,072 | 1,321 | 138 | 4 | 4,119 | 2,599 | 1,404 | 116 |
| New York U. | 7 | 8,533 | 6,464 | 1,431 | 638 | 6 | 6,587 | 4,855 | 1,169 | 563 | 45 | 1,946 | 1,609 | 262 | 75 |
| Texas A&M U. | 8 | 8,177 | 4,696 | 3,306 | 175 | 14 | 3,857 | 2,144 | 1,634 | 79 | 2 | 4,320 | 2,552 | 1,672 | 96 |
| Arizona State U. | 9 | 7,874 | 4,647 | 3,082 | 145 | 9 | 4,902 | 2,720 | 2,092 | 90 | 24 | 2,972 | 1,927 | 990 | 55 |
| U. Washington | 10 | 7,772 | 4,795 | 2,060 | 917 | 12 | 4,180 | 2,342 | 1,279 | 559 | 10 | 3,592 | 2,453 | 781 | 358 |
| Liberty U. | 11 | 7,588 | 6,512 | 0 | 1,076 | 5 | 7,045 | 5,969 | 0 | 1,076 | 137 | 543 | 543 | 0 | 0 |
| Purdue U. | 12 | 7,050 | 2,772 | 3,902 | 376 | 23 | 2,989 | 939 | 1,870 | 180 | 6 | 4,061 | 1,833 | 2,032 | 196 |
| Pennsylvania State U. | 13 | 6,882 | 4,422 | 2,274 | 186 | 21 | 3,353 | 2,077 | 1,192 | 84 | 12 | 3,529 | 2,345 | 1,082 | 102 |
| U. California, Berkeley | 14 | 6,821 | 4,305 | 1,930 | 586 | 27 | 2,663 | 1,202 | 898 | 563 | 3 | 4,158 | 3,103 | 1,032 | 23 |
| U. Florida | 15 | 6,781 | 4,053 | 2,018 | 710 | 16 | 3,614 | 1,954 | 1,155 | 505 | 21 | 3,167 | 2,099 | 863 | 205 |
| U. Colorado | 16 | 6,695 | 3,844 | 2,270 | 581 | 20 | 3,396 | 1,621 | 1,330 | 445 | 19 | 3,299 | 2,223 | 940 | 136 |
| U. Maryland, College Park[b] | 17 | 6,673 | 3,529 | 1,978 | 1,166 | 22 | 3,018 | 1,163 | 1,155 | 700 | 9 | 3,655 | 2,366 | 823 | 466 |
| George Washington U. | 18 | 6,559 | 4,224 | 851 | 1,484 | 7 | 5,487 | 3,471 | 610 | 1,406 | 92 | 1,072 | 753 | 241 | 78 |
| North Carolina State U. | 19 | 6,279 | 3,491 | 2,788 | 0 | 19 | 3,400 | 1,908 | 1,492 | 0 | 25 | 2,879 | 1,583 | 1,296 | 0 |
| Boston U. | 20 | 6,276 | 4,392 | 1,026 | 858 | 11 | 4,243 | 2,990 | 537 | 716 | 40 | 2,033 | 1,402 | 489 | 142 |
| Stanford U. | 21 | 6,197 | 3,553 | 2,493 | 151 | 42 | 2,121 | 1,056 | 965 | 100 | 5 | 4,076 | 2,497 | 1,528 | 51 |
| U. Texas, Austin | 22 | 5,974 | 3,419 | 2,111 | 444 | 38 | 2,190 | 1,291 | 686 | 213 | 8 | 3,784 | 2,128 | 1,425 | 231 |
| U. Minnesota | 23 | 5,894 | 3,742 | 1,350 | 802 | 31 | 2,483 | 1,430 | 499 | 554 | 15 | 3,411 | 2,312 | 851 | 248 |
| U. Wisconsin-Madison | 24 | 5,886 | 4,030 | 1,421 | 435 | 45 | 2,050 | 1,289 | 647 | 114 | 7 | 3,836 | 2,741 | 774 | 321 |
| Cornell U. | 25 | 5,750 | 3,779 | 1,891 | 80 | 35 | 2,303 | 1,155 | 1,068 | 80 | 13 | 3,447 | 2,624 | 823 | 0 |
| U. California, Los Angeles | 26 | 5,566 | 3,237 | 1,773 | 556 | 48 | 2,020 | 771 | 867 | 382 | 11 | 3,546 | 2,466 | 906 | 174 |
| Carnegie Mellon U. | 27 | 5,423 | 2,892 | 2,531 | 0 | 17 | 3,559 | 1,899 | 1,660 | 0 | 49 | 1,864 | 993 | 871 | 0 |
| U. California, San Diego | 28 | 5,311 | 3,031 | 2,280 | 0 | 37 | 2,201 | 899 | 1,302 | 0 | 22 | 3,110 | 2,132 | 978 | 0 |
| Ohio State U. | 29 | 5,193 | 2,770 | 1,798 | 625 | 51 | 1,783 | 622 | 735 | 426 | 16 | 3,410 | 2,148 | 1,063 | 199 |
| Northeastern U. | 30 | 5,053 | 2,672 | 2,229 | 152 | 15 | 3,653 | 1,983 | 1,598 | 72 | 67 | 1,400 | 689 | 631 | 80 |
| Indiana U. | 31 | 4,657 | 3,479 | 408 | 770 | 36 | 2,253 | 1,369 | 259 | 625 | 32 | 2,404 | 2,110 | 149 | 145 |
| Virginia Polytechnic Institute and State U. | 32 | 4,638 | 2,576 | 1,944 | 118 | 39 | 2,148 | 1,263 | 803 | 82 | 28 | 2,490 | 1,313 | 1,141 | 36 |
| U. Texas, Dallas | 33 | 4,627 | 3,317 | 1,057 | 253 | 18 | 3,446 | 2,632 | 589 | 225 | 84 | 1,181 | 685 | 468 | 28 |
| U. Chicago | 34 | 4,600 | 4,393 | 173 | 34 | 34 | 2,367 | 2,350 | 0 | 17 | 36 | 2,233 | 2,043 | 173 | 17 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Massachusetts Institute of Technology | 35 | 4,470 | 1,504 | 2,966 | 0 | 106 | 1,041 | 31 | 1,010 | 0 | 14 | 3,429 | 1,473 | 1,956 | 0 |
| Harvard U. | 36 | 4,352 | 3,236 | 483 | 633 | 104 | 1,045 | 323 | 194 | 528 | 18 | 3,307 | 2,913 | 289 | 105 |
| U. California, Davis | 37 | 4,334 | 3,139 | 934 | 261 | 94 | 1,120 | 546 | 347 | 227 | 20 | 3,214 | 2,593 | 587 | 34 |
| U. South Florida, Tampa | 38 | 4,321 | 2,218 | 912 | 1,191 | 26 | 2,777 | 1,308 | 477 | 992 | 60 | 1,544 | 910 | 435 | 199 |
| George Mason U. | 39 | 4,202 | 3,383 | 537 | 282 | 24 | 2,836 | 2,194 | 377 | 265 | 71 | 1,366 | 1,189 | 160 | 17 |
| U. Arizona | 40 | 4,168 | 2,700 | 796 | 672 | 44 | 2,073 | 1,089 | 473 | 511 | 38 | 2,095 | 1,611 | 323 | 161 |
| SUNY, U. Buffalo | 41 | 4,132 | 2,506 | 1,291 | 335 | 29 | 2,509 | 1,400 | 878 | 231 | 56 | 1,623 | 1,106 | 413 | 104 |
| Northwestern U. | 42 | 3,966 | 2,482 | 1,256 | 228 | 65 | 1,481 | 863 | 452 | 166 | 29 | 2,485 | 1,619 | 804 | 62 |
| Rutgers, State U. New Jersey | 43 | 3,860 | 2,953 | 874 | 33 | 56 | 1,577 | 1,097 | 470 | 10 | 35 | 2,283 | 1,856 | 404 | 23 |
| U. Maryland, U. C. | 43 | 3,860 | 3,715 | 145 | 0 | 13 | 3,860 | 3,715 | 145 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. California, Irvine | 45 | 3,742 | 2,584 | 997 | 161 | 78 | 1,265 | 815 | 387 | 63 | 30 | 2,477 | 1,769 | 610 | 98 |
| U. Pittsburgh | 46 | 3,680 | 2,227 | 882 | 571 | 66 | 1,477 | 715 | 383 | 379 | 37 | 2,203 | 1,512 | 499 | 192 |
| U. North Carolina, Chapel Hill | 47 | 3,623 | 2,532 | 101 | 990 | 89 | 1,163 | 410 | 3 | 750 | 31 | 2,460 | 2,122 | 98 | 240 |
| Colorado State U., Fort Collins | 48 | 3,595 | 2,598 | 884 | 113 | 43 | 2,083 | 1,522 | 487 | 74 | 62 | 1,512 | 1,076 | 397 | 39 |
| U. Central Florida | 49 | 3,528 | 1,778 | 1,219 | 531 | 47 | 2,025 | 965 | 564 | 496 | 64 | 1,503 | 813 | 655 | 35 |
| Michigan State U. | 50 | 3,510 | 2,324 | 631 | 555 | 96 | 1,112 | 542 | 136 | 434 | 33 | 2,398 | 1,782 | 495 | 121 |
| U. Utah | 51 | 3,457 | 2,076 | 890 | 491 | 61 | 1,509 | 858 | 334 | 317 | 44 | 1,948 | 1,218 | 556 | 174 |
| U. Cincinnati | 52 | 3,446 | 1,749 | 940 | 757 | 41 | 2,136 | 1,014 | 573 | 549 | 75 | 1,310 | 735 | 367 | 208 |
| U. Connecticut | 53 | 3,406 | 2,219 | 839 | 348 | 67 | 1,475 | 943 | 311 | 221 | 46 | 1,931 | 1,276 | 528 | 127 |
| U. Illinois, Chicago | 54 | 3,404 | 1,687 | 917 | 800 | 59 | 1,516 | 524 | 528 | 464 | 48 | 1,888 | 1,163 | 389 | 336 |
| U. Texas, Arlington | 55 | 3,390 | 1,652 | 1,646 | 92 | 33 | 2,435 | 1,164 | 1,230 | 41 | 97 | 955 | 488 | 416 | 51 |
| U. Massachusetts, Amherst | 56 | 3,157 | 2,179 | 621 | 357 | 80 | 1,249 | 712 | 230 | 307 | 47 | 1,908 | 1,467 | 391 | 50 |
| SUNY, Stony Brook U. | 57 | 3,145 | 2,384 | 599 | 162 | 70 | 1,398 | 969 | 297 | 132 | 54 | 1,747 | 1,415 | 302 | 30 |
| Iowa State U. | 58 | 3,102 | 1,961 | 1,054 | 87 | 93 | 1,135 | 685 | 420 | 30 | 43 | 1,967 | 1,276 | 634 | 57 |
| Georgetown U. | 59 | 3,075 | 2,986 | 0 | 89 | 30 | 2,505 | 2,419 | 0 | 86 | 132 | 570 | 567 | 0 | 3 |
| Duke U. | 60 | 3,022 | 1,949 | 924 | 149 | 115 | 929 | 481 | 350 | 98 | 39 | 2,093 | 1,468 | 574 | 51 |
| Syracuse U. | 61 | 3,018 | 2,431 | 565 | 22 | 40 | 2,137 | 1,739 | 381 | 17 | 104 | 881 | 692 | 184 | 5 |
| Washington U., Saint Louis | 62 | 2,972 | 1,743 | 1,009 | 220 | 73 | 1,395 | 563 | 629 | 203 | 59 | 1,577 | 1,180 | 380 | 17 |
| Florida State U. | 63 | 2,954 | 2,445 | 266 | 243 | 69 | 1,441 | 1,109 | 99 | 233 | 61 | 1,513 | 1,336 | 167 | 10 |
| Oregon State U. | 64 | 2,938 | 1,780 | 788 | 370 | 58 | 1,525 | 896 | 402 | 227 | 66 | 1,413 | 884 | 386 | 143 |
| San Jose State U. | 65 | 2,813 | 726 | 1,951 | 136 | 25 | 2,813 | 726 | 1,951 | 136 | 394 | 0 | 0 | 0 | 0 |
| U. Georgia | 66 | 2,758 | 2,319 | 156 | 283 | 112 | 968 | 794 | 56 | 118 | 52 | 1,790 | 1,525 | 100 | 165 |
| U. Houston | 67 | 2,743 | 1,561 | 989 | 193 | 95 | 1,117 | 547 | 487 | 83 | 55 | 1,626 | 1,014 | 502 | 110 |
| U. Virginia | 68 | 2,689 | 1,712 | 784 | 193 | 114 | 937 | 610 | 167 | 160 | 53 | 1,752 | 1,102 | 617 | 33 |
| U. Tennessee, Knoxville | 69 | 2,680 | 1,523 | 1,007 | 150 | 121 | 864 | 448 | 339 | 77 | 50 | 1,816 | 1,075 | 668 | 73 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Clemson U. | 70 | 2,669 | 1,365 | 1,172 | 132 | 71 | 1,397 | 658 | 634 | 105 | 78 | 1,272 | 707 | 538 | 27 |
| DePaul U. | 71 | 2,617 | 2,084 | 0 | 533 | 32 | 2,474 | 1,941 | 0 | 533 | 248 | 143 | 143 | 0 | 0 |
| National U. | 72 | 2,554 | 2,225 | 0 | 329 | 28 | 2,554 | 2,225 | 0 | 329 | 394 | 0 | 0 | 0 | 0 |
| Texas Tech U. | 73 | 2,496 | 1,565 | 731 | 200 | 81 | 1,247 | 802 | 312 | 133 | 82 | 1,249 | 763 | 419 | 67 |
| Stevens Institute of Technology | 74 | 2,435 | 1,243 | 1,187 | 5 | 46 | 2,037 | 1,079 | 953 | 5 | 172 | 398 | 164 | 234 | 0 |
| U. Missouri, Columbia | 75 | 2,389 | 1,533 | 333 | 523 | 87 | 1,171 | 698 | 105 | 368 | 83 | 1,218 | 835 | 228 | 155 |
| Drexel U. | 76 | 2,386 | 1,643 | 573 | 170 | 57 | 1,551 | 1,160 | 268 | 123 | 108 | 835 | 483 | 305 | 47 |
| Tufts U. | 77 | 2,376 | 1,312 | 837 | 227 | 54 | 1,637 | 850 | 577 | 210 | 117 | 739 | 462 | 260 | 17 |
| U. Pennsylvania | 78 | 2,369 | 1,919 | 450 | 0 | 511 | 75 | 75 | 0 | 0 | 34 | 2,294 | 1,844 | 450 | 0 |
| Wayne State U. | 79 | 2,360 | 1,320 | 692 | 348 | 76 | 1,282 | 564 | 479 | 239 | 91 | 1,078 | 756 | 213 | 109 |
| U. Oklahoma | 80 | 2,357 | 1,711 | 535 | 111 | 79 | 1,257 | 916 | 290 | 51 | 89 | 1,100 | 795 | 245 | 60 |
| Florida International U. | 81 | 2,325 | 1,460 | 512 | 353 | 82 | 1,226 | 710 | 247 | 269 | 90 | 1,099 | 750 | 265 | 84 |
| Case Western Reserve U. | 82 | 2,318 | 1,460 | 658 | 200 | 77 | 1,270 | 859 | 273 | 138 | 93 | 1,048 | 601 | 385 | 62 |
| U. Delaware | 83 | 2,315 | 1,551 | 660 | 104 | 134 | 810 | 546 | 169 | 95 | 63 | 1,505 | 1,005 | 491 | 9 |
| U. California, Riverside | 84 | 2,303 | 1,644 | 659 | 0 | 205 | 498 | 213 | 285 | 0 | 51 | 1,805 | 1,431 | 374 | 0 |
| U. Kentucky | 85 | 2,267 | 1,506 | 364 | 397 | 118 | 880 | 524 | 131 | 225 | 69 | 1,387 | 982 | 233 | 172 |
| Princeton U. | 86 | 2,238 | 1,558 | 680 | 0 | 368 | 208 | 175 | 33 | 0 | 41 | 2,030 | 1,383 | 647 | 0 |
| Yale U. | 86 | 2,238 | 1,794 | 295 | 149 | 338 | 243 | 178 | 14 | 51 | 42 | 1,995 | 1,616 | 281 | 98 |
| Auburn U. | 88 | 2,231 | 1,165 | 987 | 79 | 96 | 1,112 | 608 | 425 | 79 | 87 | 1,119 | 557 | 562 | 0 |
| Washington State U. | 89 | 2,187 | 1,403 | 597 | 187 | 135 | 809 | 507 | 220 | 82 | 70 | 1,378 | 896 | 377 | 105 |
| Georgia State U. | 90 | 2,162 | 1,788 | 0 | 374 | 86 | 1,172 | 920 | 0 | 252 | 96 | 990 | 868 | 0 | 122 |
| Louisiana State U. | 91 | 2,145 | 1,448 | 450 | 247 | 170 | 644 | 347 | 122 | 175 | 65 | 1,501 | 1,101 | 328 | 72 |
| U. Kansas | 92 | 2,142 | 1,511 | 347 | 284 | 139 | 780 | 487 | 151 | 142 | 72 | 1,362 | 1,024 | 196 | 142 |
| SUNY, Binghamton U. | 93 | 2,118 | 1,365 | 710 | 43 | 102 | 1,070 | 670 | 391 | 9 | 93 | 1,048 | 695 | 319 | 34 |
| U. Nebraska-Lincoln | 94 | 2,108 | 1,523 | 518 | 67 | 127 | 841 | 549 | 225 | 67 | 81 | 1,267 | 974 | 293 | 0 |
| New Jersey Institute of Technology | 95 | 2,107 | 1,107 | 985 | 15 | 55 | 1,610 | 862 | 733 | 15 | 145 | 497 | 245 | 252 | 0 |
| U. Alabama, Birmingham | 96 | 2,087 | 1,135 | 561 | 391 | 75 | 1,311 | 490 | 456 | 365 | 114 | 776 | 645 | 105 | 26 |
| U. California, Santa Barbara | 97 | 2,011 | 1,496 | 515 | 0 | 232 | 428 | 274 | 154 | 0 | 58 | 1,583 | 1,222 | 361 | 0 |
| Brown U. | 98 | 1,995 | 1,591 | 264 | 140 | 154 | 705 | 472 | 117 | 116 | 76 | 1,290 | 1,119 | 147 | 24 |
| U. Miami | 99 | 1,993 | 1,658 | 229 | 106 | 99 | 1,099 | 939 | 95 | 65 | 102 | 894 | 719 | 134 | 41 |
| U. North Texas, Denton | 100 | 1,984 | 1,562 | 272 | 150 | 92 | 1,142 | 843 | 149 | 150 | 107 | 842 | 719 | 123 | 0 |
| U. New Mexico | 101 | 1,981 | 1,201 | 551 | 229 | 124 | 854 | 394 | 321 | 139 | 86 | 1,127 | 807 | 230 | 90 |
| Lamar U. | 102 | 1,937 | 1,605 | 161 | 171 | 49 | 1,871 | 1,605 | 95 | 171 | 295 | 66 | 0 | 66 | 0 |
| Mississippi State U. | 103 | 1,897 | 1,178 | 614 | 105 | 110 | 990 | 655 | 270 | 65 | 100 | 907 | 523 | 344 | 40 |
| U. Wisconsin-Milwaukee | 104 | 1,877 | 1,235 | 295 | 347 | 105 | 1,044 | 725 | 130 | 189 | 109 | 833 | 510 | 165 | 158 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Pepperdine U. | 105 | 1,869 | 1,869 | 0 | 0 | 50 | 1,869 | 1,869 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. North Carolina, Charlotte | 106 | 1,859 | 1,407 | 334 | 118 | 83 | 1,221 | 994 | 150 | 77 | 125 | 638 | 413 | 184 | 41 |
| U. Iowa | 107 | 1,846 | 1,255 | 288 | 303 | 224 | 458 | 227 | 90 | 141 | 68 | 1,388 | 1,028 | 198 | 162 |
| Oklahoma State U. | 108 | 1,842 | 1,309 | 460 | 73 | 108 | 1,035 | 681 | 281 | 73 | 111 | 807 | 628 | 179 | 0 |
| Rochester Institute of Technology | 109 | 1,835 | 1,244 | 587 | 4 | 64 | 1,482 | 1,000 | 478 | 4 | 178 | 353 | 244 | 109 | 0 |
| Vanderbilt U. | 110 | 1,820 | 1,378 | 387 | 55 | 365 | 214 | 179 | 35 | 0 | 57 | 1,606 | 1,199 | 352 | 55 |
| West Virginia U. | 111 | 1,812 | 978 | 465 | 369 | 157 | 697 | 312 | 236 | 149 | 88 | 1,115 | 666 | 229 | 220 |
| Illinois Institute of Technology | 112 | 1,810 | 1,187 | 597 | 26 | 59 | 1,516 | 1,083 | 407 | 26 | 191 | 294 | 104 | 190 | 0 |
| San Diego State U. | 113 | 1,808 | 1,124 | 322 | 362 | 71 | 1,397 | 840 | 276 | 281 | 167 | 411 | 284 | 46 | 81 |
| Columbia U., Teachers C. | 113 | 1,808 | 1,617 | 0 | 191 | 62 | 1,497 | 1,326 | 0 | 171 | 185 | 311 | 291 | 0 | 20 |
| U. South Carolina | 115 | 1,775 | 939 | 398 | 438 | 177 | 618 | 257 | 108 | 253 | 85 | 1,157 | 682 | 290 | 185 |
| Temple U. | 116 | 1,760 | 1,417 | 197 | 146 | 126 | 847 | 650 | 95 | 102 | 99 | 913 | 767 | 102 | 44 |
| California State U., Northridge | 117 | 1,734 | 469 | 252 | 1,013 | 52 | 1,726 | 469 | 252 | 1,005 | 384 | 8 | 0 | 0 | 8 |
| U. Denver | 118 | 1,712 | 1,599 | 113 | 0 | 63 | 1,495 | 1,404 | 91 | 0 | 216 | 217 | 195 | 22 | 0 |
| SUNY, U. Albany | 119 | 1,678 | 1,394 | 30 | 254 | 144 | 756 | 528 | 9 | 219 | 98 | 922 | 866 | 21 | 35 |
| U. Massachusetts, Lowell | 120 | 1,670 | 757 | 762 | 151 | 91 | 1,147 | 535 | 499 | 113 | 140 | 523 | 222 | 263 | 38 |
| U. Texas, San Antonio | 121 | 1,666 | 1,121 | 449 | 96 | 107 | 1,037 | 719 | 222 | 96 | 127 | 629 | 402 | 227 | 0 |
| Portland State U. | 122 | 1,663 | 1,078 | 488 | 97 | 84 | 1,204 | 715 | 402 | 87 | 154 | 459 | 363 | 86 | 10 |
| California State U., Fullerton | 123 | 1,653 | 907 | 542 | 204 | 53 | 1,653 | 907 | 542 | 204 | 394 | 0 | 0 | 0 | 0 |
| American U. | 124 | 1,636 | 1,617 | 0 | 19 | 74 | 1,362 | 1,343 | 0 | 19 | 196 | 274 | 274 | 0 | 0 |
| U. Notre Dame | 125 | 1,628 | 1,019 | 609 | 0 | 320 | 269 | 184 | 85 | 0 | 73 | 1,359 | 835 | 524 | 0 |
| U. Rochester | 126 | 1,627 | 1,205 | 314 | 108 | 263 | 358 | 193 | 95 | 70 | 80 | 1,269 | 1,012 | 219 | 38 |
| U. Hawaii, Manoa | 127 | 1,622 | 1,225 | 229 | 168 | 140 | 777 | 505 | 133 | 139 | 106 | 845 | 720 | 96 | 29 |
| Kansas State U. | 128 | 1,619 | 1,175 | 342 | 102 | 145 | 750 | 517 | 143 | 90 | 105 | 869 | 658 | 199 | 12 |
| Rice U. | 129 | 1,608 | 953 | 655 | 0 | 279 | 330 | 199 | 131 | 0 | 77 | 1,278 | 754 | 524 | 0 |
| Worcester Polytechnic Institute | 130 | 1,606 | 608 | 998 | 0 | 88 | 1,167 | 410 | 757 | 0 | 161 | 439 | 198 | 241 | 0 |
| U. Arkansas, Fayetteville | 131 | 1,542 | 901 | 589 | 52 | 169 | 652 | 336 | 284 | 32 | 103 | 890 | 565 | 305 | 20 |
| Naval Postgraduate School | 132 | 1,506 | 515 | 991 | 0 | 68 | 1,459 | 498 | 961 | 0 | 312 | 47 | 17 | 30 | 0 |
| Ohio U. | 133 | 1,497 | 825 | 569 | 103 | 101 | 1,072 | 531 | 446 | 95 | 165 | 425 | 294 | 123 | 8 |
| Virginia Commonwealth U. | 134 | 1,494 | 843 | 281 | 370 | 220 | 462 | 321 | 71 | 70 | 95 | 1,032 | 522 | 210 | 300 |
| Old Dominion U. | 135 | 1,488 | 591 | 794 | 103 | 117 | 895 | 268 | 560 | 67 | 131 | 593 | 323 | 234 | 36 |
| Tulane U. | 136 | 1,450 | 987 | 96 | 367 | 158 | 693 | 360 | 27 | 306 | 116 | 757 | 627 | 69 | 61 |
| U. Maryland, Baltimore County | 137 | 1,429 | 1,188 | 241 | 0 | 146 | 748 | 652 | 96 | 0 | 121 | 681 | 536 | 145 | 0 |
| Utah State U. | 138 | 1,418 | 957 | 269 | 192 | 122 | 858 | 588 | 158 | 112 | 134 | 560 | 369 | 111 | 80 |
| Southern Methodist U. | 139 | 1,409 | 827 | 582 | 0 | 109 | 1,011 | 574 | 437 | 0 | 172 | 398 | 253 | 145 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Emory U. | 140 | 1,408 | 1,120 | 206 | 82 | 474 | 95 | 62 | 0 | 33 | 74 | 1,313 | 1,058 | 206 | 49 |
| U. Texas Health Science Center, Houston | 141 | 1,406 | 987 | 39 | 380 | 176 | 625 | 323 | 2 | 300 | 113 | 781 | 664 | 37 | 80 |
| U. Nevada, Reno | 142 | 1,403 | 818 | 321 | 264 | 163 | 680 | 294 | 138 | 248 | 118 | 723 | 524 | 183 | 16 |
| U. Louisville | 143 | 1,371 | 598 | 489 | 284 | 149 | 736 | 218 | 329 | 189 | 126 | 635 | 380 | 160 | 95 |
| U. Alabama, Tuscaloosa | 144 | 1,370 | 794 | 417 | 159 | 185 | 579 | 264 | 178 | 137 | 112 | 791 | 530 | 239 | 22 |
| Colorado School of Mines | 145 | 1,341 | 421 | 920 | 0 | 151 | 720 | 248 | 472 | 0 | 129 | 621 | 173 | 448 | 0 |
| U. Massachusetts, Boston | 146 | 1,332 | 1,048 | 0 | 284 | 148 | 737 | 552 | 0 | 185 | 130 | 595 | 496 | 0 | 99 |
| Northern Illinois U. | 147 | 1,315 | 774 | 215 | 326 | 111 | 980 | 494 | 215 | 271 | 180 | 335 | 280 | 0 | 55 |
| Western Michigan U.[c] | 148 | 1,311 | 808 | 368 | 135 | 132 | 818 | 465 | 253 | 100 | 148 | 493 | 343 | 115 | 35 |
| U. Texas, El Paso | 149 | 1,304 | 643 | 536 | 125 | 142 | 764 | 342 | 327 | 95 | 138 | 540 | 301 | 209 | 30 |
| California Institute of Technology | 150 | 1,299 | 750 | 549 | 0 | 581 | 29 | 0 | 29 | 0 | 79 | 1,270 | 750 | 520 | 0 |
| Brandeis U. | 151 | 1,289 | 1,289 | 0 | 0 | 131 | 821 | 821 | 0 | 0 | 152 | 468 | 468 | 0 | 0 |
| Kent State U. | 152 | 1,266 | 898 | 0 | 368 | 175 | 626 | 337 | 0 | 289 | 124 | 640 | 561 | 0 | 79 |
| Miami U. | 153 | 1,262 | 1,090 | 49 | 123 | 103 | 1,057 | 885 | 49 | 123 | 223 | 205 | 205 | 0 | 0 |
| Troy U. | 154 | 1,253 | 1,032 | 0 | 221 | 85 | 1,179 | 1,032 | 0 | 147 | 286 | 74 | 0 | 0 | 74 |
| New Mexico State U. | 155 | 1,247 | 788 | 344 | 115 | 133 | 812 | 506 | 210 | 96 | 163 | 435 | 282 | 134 | 19 |
| Texas State U. | 156 | 1,244 | 950 | 144 | 150 | 100 | 1,082 | 833 | 99 | 150 | 241 | 162 | 117 | 45 | 0 |
| U. Oregon | 157 | 1,220 | 1,141 | 0 | 79 | 285 | 319 | 247 | 0 | 72 | 101 | 901 | 894 | 0 | 7 |
| California State U., Long Beach | 158 | 1,167 | 770 | 260 | 137 | 90 | 1,155 | 770 | 248 | 137 | 375 | 12 | 0 | 12 | 0 |
| Michigan Technological U. | 159 | 1,144 | 455 | 675 | 14 | 167 | 671 | 228 | 429 | 14 | 150 | 473 | 227 | 246 | 0 |
| U. North Carolina, Greensboro | 160 | 1,141 | 700 | 0 | 441 | 150 | 732 | 482 | 0 | 250 | 169 | 409 | 218 | 0 | 191 |
| Florida Institute of Technology | 161 | 1,139 | 630 | 509 | 0 | 136 | 807 | 442 | 365 | 0 | 181 | 332 | 188 | 144 | 0 |
| U. Toledo | 162 | 1,129 | 607 | 309 | 213 | 172 | 635 | 282 | 199 | 154 | 146 | 494 | 325 | 110 | 59 |
| U. Memphis | 163 | 1,121 | 712 | 174 | 235 | 181 | 602 | 332 | 57 | 213 | 143 | 519 | 380 | 117 | 22 |
| Florida Atlantic U. | 164 | 1,120 | 736 | 237 | 147 | 166 | 675 | 420 | 154 | 101 | 159 | 445 | 316 | 83 | 46 |
| U. San Francisco | 165 | 1,100 | 928 | 0 | 172 | 98 | 1,100 | 928 | 0 | 172 | 394 | 0 | 0 | 0 | 0 |
| U. Nevada, Las Vegas | 166 | 1,087 | 715 | 195 | 177 | 236 | 422 | 223 | 89 | 110 | 122 | 665 | 492 | 106 | 67 |
| Missouri U. of Science and Technology | 166 | 1,087 | 289 | 798 | 0 | 228 | 444 | 123 | 321 | 0 | 123 | 643 | 166 | 477 | 0 |
| Texas Woman's U. | 168 | 1,082 | 636 | 0 | 446 | 173 | 632 | 406 | 0 | 226 | 158 | 450 | 230 | 0 | 220 |
| Brigham Young U. | 169 | 1,042 | 607 | 342 | 93 | 159 | 692 | 401 | 200 | 91 | 179 | 350 | 206 | 142 | 2 |
| Rensselaer Polytechnic Institute, Troy | 170 | 1,040 | 470 | 570 | 0 | 317 | 273 | 145 | 128 | 0 | 115 | 767 | 325 | 442 | 0 |
| East Carolina U. | 171 | 1,039 | 617 | 47 | 375 | 129 | 835 | 441 | 47 | 347 | 224 | 204 | 176 | 0 | 28 |
| Baylor U. | 172 | 1,024 | 540 | 91 | 393 | 195 | 530 | 115 | 39 | 376 | 146 | 494 | 425 | 52 | 17 |
| Lehigh U. | 173 | 1,023 | 444 | 579 | 0 | 277 | 333 | 144 | 189 | 0 | 119 | 690 | 300 | 390 | 0 |
| U. Idaho | 174 | 1,019 | 684 | 335 | 0 | 174 | 627 | 408 | 219 | 0 | 174 | 392 | 276 | 116 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| North Dakota State U. | 175 | 1,013 | 701 | 234 | 78 | 208 | 490 | 334 | 101 | 55 | 140 | 523 | 367 | 133 | 23 |
| Claremont Graduate U. | 176 | 1,008 | 892 | 0 | 116 | 282 | 325 | 274 | 0 | 51 | 120 | 683 | 618 | 0 | 65 |
| Oakland U. | 177 | 1,003 | 401 | 549 | 53 | 155 | 703 | 266 | 388 | 49 | 189 | 300 | 135 | 161 | 4 |
| Wright State U. | 178 | 1,002 | 613 | 357 | 32 | 141 | 773 | 505 | 236 | 32 | 209 | 229 | 108 | 121 | 0 |
| Boston C. | 179 | 987 | 677 | 0 | 310 | 217 | 465 | 215 | 0 | 250 | 142 | 522 | 462 | 0 | 60 |
| U. New Hampshire | 180 | 986 | 715 | 188 | 83 | 198 | 524 | 342 | 99 | 83 | 153 | 462 | 373 | 89 | 0 |
| Southern Illinois U., Carbondale | 181 | 985 | 702 | 179 | 104 | 201 | 514 | 306 | 104 | 104 | 151 | 471 | 396 | 75 | 0 |
| Carlos Albizu U. | 182 | 982 | 786 | 0 | 196 | 152 | 713 | 517 | 0 | 196 | 198 | 269 | 269 | 0 | 0 |
| Saint Louis U. | 183 | 969 | 564 | 109 | 296 | 192 | 548 | 316 | 72 | 160 | 166 | 421 | 248 | 37 | 136 |
| U. Akron | 184 | 954 | 495 | 360 | 99 | 243 | 404 | 181 | 124 | 99 | 136 | 550 | 314 | 236 | 0 |
| Long Island U. | 185 | 953 | 578 | 7 | 368 | 142 | 764 | 422 | 7 | 335 | 229 | 189 | 156 | 0 | 33 |
| U. Dayton | 185 | 953 | 461 | 492 | 0 | 137 | 800 | 447 | 353 | 0 | 246 | 153 | 14 | 139 | 0 |
| Northern Arizona U. | 187 | 948 | 660 | 98 | 190 | 165 | 677 | 427 | 60 | 190 | 197 | 271 | 233 | 38 | 0 |
| California Baptist U. | 188 | 945 | 593 | 34 | 318 | 113 | 945 | 593 | 34 | 318 | 394 | 0 | 0 | 0 | 0 |
| Antioch U. | 189 | 943 | 943 | 0 | 0 | 147 | 744 | 744 | 0 | 0 | 225 | 199 | 199 | 0 | 0 |
| Dartmouth C. | 190 | 941 | 582 | 219 | 140 | 294 | 313 | 74 | 106 | 133 | 128 | 628 | 508 | 113 | 7 |
| U. California, San Francisco | 191 | 930 | 674 | 95 | 161 | 458 | 109 | 0 | 15 | 94 | 110 | 821 | 674 | 80 | 67 |
| Kennesaw State U. | 192 | 929 | 609 | 197 | 123 | 123 | 855 | 535 | 197 | 123 | 286 | 74 | 74 | 0 | 0 |
| U. Rhode Island | 193 | 924 | 581 | 206 | 137 | 200 | 516 | 333 | 105 | 78 | 170 | 408 | 248 | 101 | 59 |
| Regis U. | 194 | 898 | 870 | 0 | 28 | 116 | 898 | 870 | 0 | 28 | 394 | 0 | 0 | 0 | 0 |
| U. New Haven | 195 | 884 | 542 | 326 | 16 | 124 | 854 | 512 | 326 | 16 | 341 | 30 | 30 | 0 | 0 |
| California State U., Sacramento | 196 | 880 | 554 | 221 | 105 | 118 | 880 | 554 | 221 | 105 | 394 | 0 | 0 | 0 | 0 |
| U. Central Missouri | 197 | 879 | 689 | 55 | 135 | 120 | 879 | 689 | 55 | 135 | 394 | 0 | 0 | 0 | 0 |
| U. Alabama, Huntsville | 198 | 877 | 385 | 484 | 8 | 186 | 572 | 259 | 313 | 0 | 187 | 305 | 126 | 171 | 8 |
| U. Missouri, Kansas City | 199 | 861 | 583 | 188 | 90 | 212 | 480 | 340 | 130 | 10 | 175 | 381 | 243 | 58 | 80 |
| U. Wyoming | 200 | 846 | 583 | 199 | 64 | 240 | 408 | 284 | 60 | 64 | 162 | 438 | 299 | 139 | 0 |
| Wichita State U. | 201 | 845 | 480 | 299 | 66 | 171 | 637 | 363 | 214 | 60 | 222 | 208 | 117 | 85 | 6 |
| U. Houston-Clear Lake | 202 | 840 | 726 | 100 | 14 | 128 | 840 | 726 | 100 | 14 | 394 | 0 | 0 | 0 | 0 |
| California Institute of Integral Studies | 203 | 836 | 836 | 0 | 0 | 179 | 607 | 607 | 0 | 0 | 209 | 229 | 229 | 0 | 0 |
| San Francisco State U. | 204 | 835 | 649 | 77 | 109 | 129 | 835 | 649 | 77 | 109 | 394 | 0 | 0 | 0 | 0 |
| U. Vermont | 205 | 824 | 559 | 100 | 165 | 237 | 418 | 205 | 56 | 157 | 171 | 406 | 354 | 44 | 8 |
| California State U., Los Angeles | 206 | 820 | 547 | 160 | 113 | 138 | 799 | 547 | 160 | 92 | 356 | 21 | 0 | 0 | 21 |
| U. North Dakota | 207 | 807 | 485 | 206 | 116 | 207 | 497 | 306 | 90 | 101 | 186 | 310 | 179 | 116 | 15 |
| New School | 208 | 804 | 804 | 0 | 0 | 231 | 431 | 431 | 0 | 0 | 176 | 373 | 373 | 0 | 0 |
| Montclair State U. | 209 | 800 | 609 | 0 | 191 | 161 | 687 | 501 | 0 | 186 | 267 | 113 | 108 | 0 | 5 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| U. Mississippi | 210 | 797 | 486 | 78 | 233 | 296 | 308 | 176 | 29 | 103 | 149 | 489 | 310 | 49 | 130 |
| Montana State U. | 211 | 786 | 621 | 165 | 0 | 273 | 345 | 259 | 86 | 0 | 160 | 441 | 362 | 79 | 0 |
| Texas A&M U.-Kingsville | 212 | 764 | 425 | 264 | 75 | 153 | 710 | 411 | 224 | 75 | 303 | 54 | 14 | 40 | 0 |
| Villanova U. | 213 | 762 | 320 | 442 | 0 | 161 | 687 | 320 | 367 | 0 | 283 | 75 | 0 | 75 | 0 |
| U. Southern Mississippi | 214 | 760 | 482 | 73 | 205 | 270 | 349 | 209 | 6 | 134 | 167 | 411 | 273 | 67 | 71 |
| Bowling Green State U. | 215 | 755 | 659 | 27 | 69 | 230 | 442 | 354 | 27 | 61 | 184 | 313 | 305 | 0 | 8 |
| Cleveland State U. | 216 | 752 | 369 | 274 | 109 | 189 | 558 | 243 | 206 | 109 | 227 | 194 | 126 | 68 | 0 |
| Towson U. | 217 | 741 | 646 | 0 | 95 | 168 | 670 | 584 | 0 | 86 | 292 | 71 | 62 | 0 | 9 |
| U. Maine | 218 | 727 | 541 | 151 | 35 | 256 | 371 | 249 | 87 | 35 | 177 | 356 | 292 | 64 | 0 |
| U. Illinois, Springfield | 219 | 701 | 639 | 0 | 62 | 156 | 701 | 639 | 0 | 62 | 394 | 0 | 0 | 0 | 0 |
| U. Texas Rio Grande Valley | 220 | 692 | 373 | 105 | 214 | 159 | 692 | 373 | 105 | 214 | 394 | 0 | 0 | 0 | 0 |
| Ball State U. | 221 | 687 | 604 | 0 | 83 | 184 | 587 | 504 | 0 | 83 | 270 | 100 | 100 | 0 | 0 |
| Marquette U. | 222 | 682 | 341 | 187 | 154 | 267 | 351 | 150 | 85 | 116 | 182 | 331 | 191 | 102 | 38 |
| California State Polytechnic U., Pomona | 223 | 678 | 393 | 285 | 0 | 164 | 678 | 393 | 285 | 0 | 394 | 0 | 0 | 0 | 0 |
| CUNY, City C. | 224 | 671 | 358 | 313 | 0 | 196 | 529 | 358 | 171 | 0 | 249 | 142 | 0 | 142 | 0 |
| South Dakota State U. | 225 | 668 | 510 | 127 | 31 | 234 | 424 | 328 | 81 | 15 | 201 | 244 | 182 | 46 | 16 |
| U. Puerto Rico, Mayaguez | 226 | 665 | 421 | 244 | 0 | 205 | 498 | 357 | 141 | 0 | 237 | 167 | 64 | 103 | 0 |
| U. Nebraska, Omaha | 227 | 661 | 661 | 0 | 0 | 476 | 93 | 93 | 0 | 0 | 133 | 568 | 568 | 0 | 0 |
| Air Force Institute of Technology | 228 | 650 | 138 | 508 | 4 | 202 | 512 | 111 | 397 | 4 | 253 | 138 | 27 | 111 | 0 |
| U. Louisiana, Lafayette | 229 | 624 | 376 | 159 | 89 | 278 | 332 | 201 | 65 | 66 | 192 | 292 | 175 | 94 | 23 |
| U. West Florida | 230 | 610 | 454 | 6 | 150 | 178 | 610 | 454 | 6 | 150 | 394 | 0 | 0 | 0 | 0 |
| U. Puerto Rico, Medical Sciences Campus | 231 | 608 | 189 | 0 | 419 | 219 | 463 | 118 | 0 | 345 | 247 | 145 | 71 | 0 | 74 |
| Saint Mary's U. Minnesota | 232 | 604 | 580 | 0 | 24 | 180 | 604 | 580 | 0 | 24 | 394 | 0 | 0 | 0 | 0 |
| Barry U. | 233 | 602 | 464 | 0 | 138 | 214 | 475 | 429 | 0 | 46 | 258 | 127 | 35 | 0 | 92 |
| Howard U. | 234 | 600 | 481 | 42 | 77 | 420 | 145 | 86 | 9 | 50 | 156 | 455 | 395 | 33 | 27 |
| CUNY, Hunter C. | 234 | 600 | 548 | 0 | 52 | 182 | 600 | 548 | 0 | 52 | 394 | 0 | 0 | 0 | 0 |
| CUNY, Queens C. | 234 | 600 | 511 | 0 | 89 | 182 | 600 | 511 | 0 | 89 | 394 | 0 | 0 | 0 | 0 |
| Boise State U. | 237 | 596 | 352 | 163 | 81 | 266 | 352 | 197 | 74 | 81 | 201 | 244 | 155 | 89 | 0 |
| Texas A&M U.-Commerce | 238 | 593 | 514 | 0 | 79 | 187 | 567 | 488 | 0 | 79 | 346 | 26 | 26 | 0 | 0 |
| Marshall U. | 239 | 590 | 396 | 42 | 152 | 193 | 542 | 348 | 42 | 152 | 310 | 48 | 48 | 0 | 0 |
| U. San Diego | 240 | 587 | 361 | 0 | 226 | 197 | 527 | 361 | 0 | 166 | 300 | 60 | 0 | 0 | 60 |
| U. California, Merced | 241 | 577 | 387 | 160 | 30 | 566 | 38 | 16 | 22 | 0 | 139 | 539 | 371 | 138 | 30 |
| Baylor C. of Medicine | 242 | 575 | 554 | 0 | 21 | 620 | 18 | 0 | 0 | 18 | 135 | 557 | 554 | 0 | 3 |
| East Tennessee State U. | 243 | 568 | 228 | 0 | 340 | 233 | 426 | 158 | 0 | 268 | 249 | 142 | 70 | 0 | 72 |
| West Chester U. Pennsylvania | 244 | 567 | 318 | 0 | 249 | 187 | 567 | 318 | 0 | 249 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| U. Massachusetts, Dartmouth | 245 | 565 | 403 | 139 | 23 | 251 | 386 | 311 | 75 | 0 | 234 | 179 | 92 | 64 | 23 |
| California State U., Fresno | 246 | 558 | 345 | 83 | 130 | 189 | 558 | 345 | 83 | 130 | 394 | 0 | 0 | 0 | 0 |
| U. North Texas, Health Science Center | 247 | 557 | 358 | 0 | 199 | 218 | 464 | 277 | 0 | 187 | 273 | 93 | 81 | 0 | 12 |
| Loyola U., Chicago | 248 | 556 | 497 | 0 | 59 | 246 | 391 | 332 | 0 | 59 | 238 | 165 | 165 | 0 | 0 |
| Eastern Illinois U. | 248 | 556 | 433 | 0 | 123 | 191 | 556 | 433 | 0 | 123 | 394 | 0 | 0 | 0 | 0 |
| Illinois State U. | 250 | 552 | 463 | 0 | 89 | 221 | 461 | 388 | 0 | 73 | 274 | 91 | 75 | 0 | 16 |
| U. Montana | 251 | 551 | 403 | 0 | 148 | 257 | 369 | 227 | 0 | 142 | 232 | 182 | 176 | 0 | 6 |
| St. John's U., Queens | 252 | 549 | 319 | 0 | 230 | 261 | 366 | 243 | 0 | 123 | 231 | 183 | 76 | 0 | 107 |
| Central Michigan U. | 253 | 548 | 421 | 16 | 111 | 249 | 389 | 262 | 16 | 111 | 243 | 159 | 159 | 0 | 0 |
| Fielding Graduate U. | 254 | 546 | 546 | 0 | 0 | 585 | 28 | 28 | 0 | 0 | 144 | 518 | 518 | 0 | 0 |
| Idaho State U. | 255 | 540 | 247 | 80 | 213 | 262 | 365 | 139 | 39 | 187 | 236 | 175 | 108 | 41 | 26 |
| Grand Valley State U. | 255 | 540 | 304 | 59 | 177 | 194 | 540 | 304 | 59 | 177 | 394 | 0 | 0 | 0 | 0 |
| U. Nebraska, Medical Center | 257 | 533 | 404 | 0 | 129 | 513 | 74 | 70 | 0 | 4 | 154 | 459 | 334 | 0 | 125 |
| Seton Hall U. | 257 | 533 | 306 | 0 | 227 | 289 | 317 | 216 | 0 | 101 | 217 | 216 | 90 | 0 | 126 |
| Adelphi U. | 259 | 529 | 312 | 0 | 217 | 248 | 390 | 207 | 0 | 183 | 251 | 139 | 105 | 0 | 34 |
| Eastern Michigan U. | 260 | 524 | 475 | 0 | 49 | 213 | 479 | 430 | 0 | 49 | 317 | 45 | 45 | 0 | 0 |
| Southern Illinois U., Edwardsville | 260 | 524 | 333 | 126 | 65 | 198 | 524 | 333 | 126 | 65 | 394 | 0 | 0 | 0 | 0 |
| North Carolina Agricultural and Technical State U. | 262 | 522 | 204 | 318 | 0 | 354 | 223 | 113 | 110 | 0 | 190 | 299 | 91 | 208 | 0 |
| National Louis U. | 263 | 519 | 519 | 0 | 0 | 215 | 474 | 474 | 0 | 0 | 317 | 45 | 45 | 0 | 0 |
| Wake Forest U. | 264 | 513 | 399 | 66 | 48 | 343 | 233 | 175 | 10 | 48 | 194 | 280 | 224 | 56 | 0 |
| U. Alaska, Fairbanks | 265 | 511 | 443 | 68 | 0 | 312 | 281 | 230 | 51 | 0 | 208 | 230 | 213 | 17 | 0 |
| U. Arkansas for Medical Sciences | 266 | 509 | 138 | 0 | 371 | 255 | 372 | 39 | 0 | 333 | 256 | 137 | 99 | 0 | 38 |
| Pontifical Catholic U. Puerto Rico | 267 | 506 | 506 | 0 | 0 | 371 | 203 | 203 | 0 | 0 | 188 | 303 | 303 | 0 | 0 |
| St. Cloud State U. | 267 | 506 | 339 | 81 | 86 | 203 | 506 | 339 | 81 | 86 | 394 | 0 | 0 | 0 | 0 |
| U. South Dakota | 269 | 503 | 348 | 20 | 135 | 318 | 271 | 162 | 9 | 100 | 205 | 232 | 186 | 11 | 35 |
| CUNY, Brooklyn C. | 270 | 499 | 368 | 0 | 131 | 204 | 499 | 368 | 0 | 131 | 394 | 0 | 0 | 0 | 0 |
| Loma Linda U. | 271 | 490 | 204 | 0 | 286 | 314 | 276 | 61 | 0 | 215 | 219 | 214 | 143 | 0 | 71 |
| U. New England | 271 | 490 | 152 | 0 | 338 | 208 | 490 | 152 | 0 | 338 | 394 | 0 | 0 | 0 | 0 |
| Georgia Southern U. | 273 | 488 | 195 | 53 | 240 | 210 | 488 | 195 | 53 | 240 | 394 | 0 | 0 | 0 | 0 |
| CUNY, Baruch C. | 274 | 487 | 419 | 68 | 0 | 211 | 487 | 419 | 68 | 0 | 394 | 0 | 0 | 0 | 0 |
| Fordham U. | 275 | 476 | 476 | 0 | 0 | 358 | 219 | 219 | 0 | 0 | 199 | 257 | 257 | 0 | 0 |
| Benedictine U. | 276 | 474 | 85 | 0 | 389 | 215 | 474 | 85 | 0 | 389 | 394 | 0 | 0 | 0 | 0 |
| U. North Carolina, Wilmington | 277 | 470 | 470 | 0 | 0 | 226 | 449 | 449 | 0 | 0 | 356 | 21 | 21 | 0 | 0 |
| Palo Alto U. | 278 | 468 | 468 | 0 | 0 | 574 | 33 | 33 | 0 | 0 | 163 | 435 | 435 | 0 | 0 |
| Marymount U. | 279 | 465 | 410 | 0 | 55 | 245 | 393 | 338 | 0 | 55 | 291 | 72 | 72 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| U. Texas Southwestern Medical Center | 280 | 460 | 411 | 37 | 12 | 639 | 9 | 1 | 0 | 8 | 157 | 451 | 410 | 37 | 4 |
| California State U., East Bay | 281 | 459 | 365 | 0 | 94 | 222 | 459 | 365 | 0 | 94 | 394 | 0 | 0 | 0 | 0 |
| Western Kentucky U. | 281 | 459 | 209 | 0 | 250 | 222 | 459 | 209 | 0 | 250 | 394 | 0 | 0 | 0 | 0 |
| Rowan U. | 283 | 455 | 210 | 193 | 52 | 279 | 330 | 174 | 104 | 52 | 260 | 125 | 36 | 89 | 0 |
| Tarleton State U. | 284 | 452 | 452 | 0 | 0 | 229 | 443 | 443 | 0 | 0 | 381 | 9 | 9 | 0 | 0 |
| Missouri State U. | 285 | 450 | 362 | 0 | 88 | 225 | 450 | 362 | 0 | 88 | 394 | 0 | 0 | 0 | 0 |
| New York Institute of Technology | 286 | 449 | 274 | 134 | 41 | 226 | 449 | 274 | 134 | 41 | 394 | 0 | 0 | 0 | 0 |
| Middle Tennessee State U. | 287 | 447 | 429 | 0 | 18 | 259 | 367 | 349 | 0 | 18 | 280 | 80 | 80 | 0 | 0 |
| U. Northern Colorado | 288 | 441 | 193 | 0 | 248 | 253 | 373 | 157 | 0 | 216 | 293 | 68 | 36 | 0 | 32 |
| U. South Alabama | 289 | 439 | 312 | 68 | 59 | 334 | 249 | 145 | 50 | 54 | 228 | 190 | 167 | 18 | 5 |
| North Carolina Central U. | 290 | 435 | 325 | 0 | 110 | 239 | 417 | 307 | 0 | 110 | 363 | 18 | 18 | 0 | 0 |
| Embry-Riddle Aeronautical U. | 291 | 434 | 99 | 335 | 0 | 289 | 317 | 80 | 237 | 0 | 265 | 117 | 19 | 98 | 0 |
| U. Missouri, Saint Louis | 292 | 429 | 398 | 0 | 31 | 371 | 203 | 203 | 0 | 0 | 212 | 226 | 195 | 0 | 31 |
| U. Tulsa | 292 | 429 | 241 | 147 | 41 | 358 | 219 | 111 | 67 | 41 | 220 | 210 | 130 | 80 | 0 |
| Roosevelt U. | 294 | 428 | 428 | 0 | 0 | 240 | 408 | 408 | 0 | 0 | 360 | 20 | 20 | 0 | 0 |
| Northwest Missouri State U. | 295 | 424 | 424 | 0 | 0 | 234 | 424 | 424 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Texas, Tyler | 296 | 421 | 284 | 29 | 108 | 259 | 367 | 280 | 29 | 58 | 303 | 54 | 4 | 0 | 50 |
| Clarkson U. | 297 | 418 | 136 | 262 | 20 | 324 | 261 | 68 | 173 | 20 | 244 | 157 | 68 | 89 | 0 |
| California State U., San Bernardino | 297 | 418 | 383 | 0 | 35 | 237 | 418 | 383 | 0 | 35 | 394 | 0 | 0 | 0 | 0 |
| Hofstra U. | 299 | 412 | 234 | 0 | 178 | 302 | 296 | 118 | 0 | 178 | 266 | 116 | 116 | 0 | 0 |
| Touro C. | 300 | 408 | 302 | 0 | 106 | 240 | 408 | 302 | 0 | 106 | 394 | 0 | 0 | 0 | 0 |
| U. Texas Health Science Center, San Antonio | 301 | 406 | 247 | 34 | 125 | 398 | 165 | 53 | 16 | 96 | 203 | 241 | 194 | 18 | 29 |
| California Polytechnic State U., San Luis Obispo | 302 | 402 | 183 | 219 | 0 | 244 | 402 | 183 | 219 | 0 | 394 | 0 | 0 | 0 | 0 |
| Oregon Health and Science U. | 303 | 396 | 305 | 58 | 33 | 458 | 109 | 96 | 0 | 13 | 193 | 287 | 209 | 58 | 20 |
| Western Illinois U. | 304 | 395 | 330 | 0 | 65 | 249 | 389 | 324 | 0 | 65 | 390 | 6 | 6 | 0 | 0 |
| Simmons U. | 305 | 391 | 363 | 0 | 28 | 246 | 391 | 363 | 0 | 28 | 394 | 0 | 0 | 0 | 0 |
| C. of William and Mary | 306 | 388 | 388 | 0 | 0 | 404 | 160 | 160 | 0 | 0 | 211 | 228 | 228 | 0 | 0 |
| Louisiana Tech U. | 307 | 386 | 196 | 131 | 59 | 389 | 176 | 72 | 45 | 59 | 220 | 210 | 124 | 86 | 0 |
| Lawrence Technological U. | 308 | 384 | 77 | 307 | 0 | 253 | 373 | 77 | 296 | 0 | 376 | 11 | 0 | 11 | 0 |
| U. New Orleans | 309 | 377 | 249 | 128 | 0 | 356 | 221 | 159 | 62 | 0 | 245 | 156 | 90 | 66 | 0 |
| Appalachian State U. | 309 | 377 | 258 | 0 | 119 | 252 | 377 | 258 | 0 | 119 | 394 | 0 | 0 | 0 | 0 |
| Southern Connecticut State U. | 311 | 376 | 197 | 0 | 179 | 267 | 351 | 197 | 0 | 154 | 350 | 25 | 0 | 0 | 25 |
| Southern U. and A&M C. | 312 | 373 | 303 | 26 | 44 | 324 | 261 | 191 | 26 | 44 | 268 | 112 | 112 | 0 | 0 |
| Polytechnic U. Puerto Rico | 313 | 369 | 50 | 319 | 0 | 267 | 351 | 50 | 301 | 0 | 363 | 18 | 0 | 18 | 0 |
| Angelo State U. | 314 | 368 | 310 | 0 | 58 | 258 | 368 | 310 | 0 | 58 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Jackson State U. | 315 | 364 | 145 | 38 | 181 | 370 | 204 | 72 | 22 | 110 | 242 | 160 | 73 | 16 | 71 |
| Texas A&M U.-Corpus Christi | 316 | 358 | 293 | 12 | 53 | 311 | 282 | 217 | 12 | 53 | 282 | 76 | 76 | 0 | 0 |
| Lewis U. | 317 | 357 | 357 | 0 | 0 | 264 | 357 | 357 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| SUNY, C. of Environmental Science and Forestry | 318 | 353 | 291 | 62 | 0 | 377 | 189 | 163 | 26 | 0 | 240 | 164 | 128 | 36 | 0 |
| U. Northern Iowa | 318 | 353 | 218 | 0 | 135 | 265 | 353 | 218 | 0 | 135 | 394 | 0 | 0 | 0 | 0 |
| Dakota State U. | 320 | 350 | 337 | 0 | 13 | 366 | 212 | 199 | 0 | 13 | 253 | 138 | 138 | 0 | 0 |
| Seattle U. | 321 | 349 | 319 | 30 | 0 | 270 | 349 | 319 | 30 | 0 | 394 | 0 | 0 | 0 | 0 |
| Massachusetts C. of Pharmacy and Health Sciences | 322 | 348 | 23 | 0 | 325 | 320 | 269 | 16 | 0 | 253 | 281 | 79 | 7 | 0 | 72 |
| U. Central Oklahoma | 322 | 348 | 240 | 23 | 85 | 272 | 348 | 240 | 23 | 85 | 394 | 0 | 0 | 0 | 0 |
| Morgan State U. | 324 | 346 | 107 | 139 | 100 | 406 | 158 | 61 | 60 | 37 | 230 | 188 | 46 | 79 | 63 |
| U. Massachusetts, Medical School | 325 | 345 | 345 | 0 | 0 | 629 | 14 | 14 | 0 | 0 | 182 | 331 | 331 | 0 | 0 |
| Humboldt State U. | 326 | 344 | 344 | 0 | 0 | 274 | 344 | 344 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Keiser U., Fort Lauderdale | 327 | 338 | 338 | 0 | 0 | 406 | 158 | 158 | 0 | 0 | 233 | 180 | 180 | 0 | 0 |
| Central Washington U. | 328 | 337 | 300 | 20 | 17 | 275 | 337 | 300 | 20 | 17 | 394 | 0 | 0 | 0 | 0 |
| Clark U. | 329 | 335 | 335 | 0 | 0 | 375 | 197 | 197 | 0 | 0 | 253 | 138 | 138 | 0 | 0 |
| Kean U. | 329 | 335 | 264 | 0 | 71 | 281 | 327 | 264 | 0 | 63 | 384 | 8 | 0 | 0 | 8 |
| U. North Florida | 331 | 334 | 205 | 46 | 83 | 276 | 334 | 205 | 46 | 83 | 394 | 0 | 0 | 0 | 0 |
| Tennessee State U. | 332 | 332 | 210 | 51 | 71 | 340 | 241 | 134 | 36 | 71 | 274 | 91 | 76 | 15 | 0 |
| Azusa Pacific U. | 332 | 332 | 327 | 0 | 5 | 284 | 322 | 322 | 0 | 0 | 380 | 10 | 5 | 0 | 5 |
| Chapman U. | 334 | 327 | 193 | 0 | 134 | 339 | 242 | 135 | 0 | 107 | 278 | 85 | 58 | 0 | 27 |
| U. Louisiana, Monroe | 335 | 326 | 185 | 0 | 141 | 303 | 295 | 185 | 0 | 110 | 338 | 31 | 0 | 0 | 31 |
| Arkansas State U. | 336 | 325 | 247 | 7 | 71 | 333 | 251 | 173 | 7 | 71 | 286 | 74 | 74 | 0 | 0 |
| Midwestern U. | 336 | 325 | 325 | 0 | 0 | 282 | 325 | 325 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Lake Erie C. of Osteopathic Medicine | 338 | 324 | 324 | 0 | 0 | 291 | 316 | 316 | 0 | 0 | 384 | 8 | 8 | 0 | 0 |
| Catholic U. of America | 339 | 319 | 199 | 120 | 0 | 422 | 143 | 93 | 50 | 0 | 235 | 176 | 106 | 70 | 0 |
| Eastern Washington U. | 339 | 319 | 220 | 0 | 99 | 285 | 319 | 220 | 0 | 99 | 394 | 0 | 0 | 0 | 0 |
| Mississippi C. | 339 | 319 | 319 | 0 | 0 | 285 | 319 | 319 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Philadelphia C. of Osteopathic Medicine | 339 | 319 | 319 | 0 | 0 | 285 | 319 | 319 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Mayo Clinic, Mayo Graduate School | 343 | 317 | 268 | 43 | 6 | 507 | 77 | 67 | 4 | 6 | 204 | 240 | 201 | 39 | 0 |
| Florida A&M U. | 343 | 317 | 204 | 61 | 52 | 356 | 221 | 156 | 14 | 51 | 271 | 96 | 48 | 47 | 1 |
| California State U., Chico | 345 | 315 | 244 | 0 | 71 | 292 | 315 | 244 | 0 | 71 | 394 | 0 | 0 | 0 | 0 |
| Eastern Kentucky U. | 345 | 315 | 209 | 0 | 106 | 292 | 315 | 209 | 0 | 106 | 394 | 0 | 0 | 0 | 0 |
| West Texas A&M U. | 347 | 314 | 241 | 0 | 73 | 297 | 307 | 234 | 0 | 73 | 389 | 7 | 7 | 0 | 0 |
| Inter American U. Puerto Rico, Metro | 348 | 313 | 313 | 0 | 0 | 294 | 313 | 313 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| James Madison U. | 349 | 311 | 222 | 0 | 89 | 326 | 260 | 171 | 0 | 89 | 309 | 51 | 51 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Eastern Virginia Medical School | 350 | 307 | 179 | 0 | 128 | 315 | 275 | 147 | 0 | 128 | 333 | 32 | 32 | 0 | 0 |
| Mercer U. | 351 | 306 | 59 | 68 | 179 | 332 | 252 | 59 | 68 | 125 | 303 | 54 | 0 | 0 | 54 |
| New York Medical C. | 351 | 306 | 188 | 0 | 118 | 316 | 274 | 156 | 0 | 118 | 333 | 32 | 32 | 0 | 0 |
| U. Hartford | 351 | 306 | 215 | 91 | 0 | 298 | 306 | 215 | 91 | 0 | 394 | 0 | 0 | 0 | 0 |
| Tennessee Technological U. | 354 | 305 | 123 | 182 | 0 | 384 | 180 | 99 | 81 | 0 | 260 | 125 | 24 | 101 | 0 |
| Saint Joseph's U. | 354 | 305 | 305 | 0 | 0 | 299 | 305 | 305 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Columbus State U. | 356 | 304 | 289 | 0 | 15 | 300 | 304 | 289 | 0 | 15 | 394 | 0 | 0 | 0 | 0 |
| Nova Southeastern U. | 357 | 302 | 302 | 0 | 0 | 426 | 137 | 137 | 0 | 0 | 238 | 165 | 165 | 0 | 0 |
| SUNY, Downstate Medical Center | 358 | 299 | 50 | 10 | 239 | 391 | 173 | 0 | 0 | 173 | 259 | 126 | 50 | 10 | 66 |
| Northeastern Illinois U. | 359 | 298 | 267 | 0 | 31 | 301 | 298 | 267 | 0 | 31 | 394 | 0 | 0 | 0 | 0 |
| Icahn School of Medicine at Mt. Sinai | 360 | 297 | 297 | 0 | 0 | 497 | 82 | 82 | 0 | 0 | 218 | 215 | 215 | 0 | 0 |
| South Dakota School of Mines and Technology | 361 | 296 | 80 | 216 | 0 | 385 | 178 | 35 | 143 | 0 | 262 | 118 | 45 | 73 | 0 |
| Fairleigh Dickinson U. | 362 | 295 | 252 | 23 | 20 | 303 | 295 | 252 | 23 | 20 | 394 | 0 | 0 | 0 | 0 |
| Pittsburg State U. | 362 | 295 | 216 | 50 | 29 | 303 | 295 | 216 | 50 | 29 | 394 | 0 | 0 | 0 | 0 |
| U. Detroit Mercy | 364 | 294 | 99 | 170 | 25 | 320 | 269 | 99 | 145 | 25 | 350 | 25 | 0 | 25 | 0 |
| Emporia State U. | 365 | 293 | 293 | 0 | 0 | 306 | 293 | 293 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Tennessee, Health Science Center | 366 | 292 | 171 | 6 | 115 | 474 | 95 | 45 | 4 | 46 | 226 | 197 | 126 | 2 | 69 |
| SUNY, Polytechnic Institute | 366 | 292 | 205 | 87 | 0 | 358 | 219 | 205 | 14 | 0 | 289 | 73 | 0 | 73 | 0 |
| Medical U. South Carolina | 368 | 291 | 231 | 0 | 60 | 530 | 60 | 36 | 0 | 24 | 207 | 231 | 195 | 0 | 36 |
| U. Wisconsin-La Crosse | 369 | 288 | 231 | 36 | 21 | 307 | 288 | 231 | 36 | 21 | 394 | 0 | 0 | 0 | 0 |
| Western Washington U. | 370 | 286 | 223 | 0 | 63 | 308 | 286 | 223 | 0 | 63 | 394 | 0 | 0 | 0 | 0 |
| Governors State U. | 371 | 285 | 191 | 0 | 94 | 309 | 285 | 191 | 0 | 94 | 394 | 0 | 0 | 0 | 0 |
| Murray State U. | 372 | 283 | 218 | 0 | 65 | 310 | 283 | 218 | 0 | 65 | 394 | 0 | 0 | 0 | 0 |
| U. Nebraska, Kearney | 373 | 279 | 240 | 0 | 39 | 313 | 279 | 240 | 0 | 39 | 394 | 0 | 0 | 0 | 0 |
| Scripps Research Institute | 374 | 276 | 276 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 195 | 276 | 276 | 0 | 0 |
| Augusta U. | 375 | 273 | 183 | 0 | 90 | 412 | 155 | 98 | 0 | 57 | 262 | 118 | 85 | 0 | 33 |
| Medical C. Wisconsin | 376 | 271 | 196 | 25 | 50 | 549 | 49 | 16 | 0 | 33 | 214 | 222 | 180 | 25 | 17 |
| Minnesota State U., Mankato | 377 | 270 | 196 | 24 | 50 | 319 | 270 | 196 | 24 | 50 | 394 | 0 | 0 | 0 | 0 |
| Duquesne U. | 378 | 267 | 162 | 0 | 105 | 553 | 47 | 47 | 0 | 0 | 215 | 220 | 115 | 0 | 105 |
| U. Texas Medical Branch | 379 | 266 | 209 | 0 | 57 | 571 | 34 | 29 | 0 | 5 | 205 | 232 | 180 | 0 | 52 |
| U. Baltimore | 380 | 263 | 263 | 0 | 0 | 323 | 263 | 263 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Rockefeller U. | 381 | 262 | 262 | 0 | 0 | 629 | 14 | 14 | 0 | 0 | 200 | 248 | 248 | 0 | 0 |
| Stephen F. Austin State U. | 381 | 262 | 182 | 0 | 80 | 345 | 232 | 152 | 0 | 80 | 341 | 30 | 30 | 0 | 0 |
| New Jersey City U. | 383 | 260 | 180 | 0 | 80 | 350 | 228 | 148 | 0 | 80 | 333 | 32 | 32 | 0 | 0 |
| Hood C. | 383 | 260 | 260 | 0 | 0 | 326 | 260 | 260 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Touro U., Vallejo | 385 | 259 | 0 | 0 | 259 | 328 | 259 | 0 | 0 | 259 | 394 | 0 | 0 | 0 | 0 |
| A. T. Still U. | 386 | 258 | 24 | 0 | 234 | 329 | 258 | 24 | 0 | 234 | 394 | 0 | 0 | 0 | 0 |
| Northeastern State U. | 386 | 258 | 158 | 0 | 100 | 329 | 258 | 158 | 0 | 100 | 394 | 0 | 0 | 0 | 0 |
| Loyola U., Maryland | 388 | 257 | 152 | 0 | 105 | 331 | 257 | 152 | 0 | 105 | 394 | 0 | 0 | 0 | 0 |
| New Mexico Institute of Mining and Technology | 389 | 255 | 131 | 124 | 0 | 400 | 164 | 69 | 95 | 0 | 274 | 91 | 62 | 29 | 0 |
| Albert Einstein C. of Medicine | 390 | 253 | 224 | 0 | 29 | 581 | 29 | 0 | 0 | 29 | 213 | 224 | 224 | 0 | 0 |
| U. Tennessee, Chattanooga | 390 | 253 | 165 | 57 | 31 | 350 | 228 | 141 | 56 | 31 | 350 | 25 | 24 | 1 | 0 |
| Indiana U. Pennsylvania | 392 | 252 | 207 | 3 | 42 | 347 | 231 | 186 | 3 | 42 | 356 | 21 | 21 | 0 | 0 |
| Central Connecticut State U. | 393 | 249 | 228 | 21 | 0 | 334 | 249 | 228 | 21 | 0 | 394 | 0 | 0 | 0 | 0 |
| Lipscomb U. | 394 | 245 | 223 | 9 | 13 | 336 | 245 | 223 | 9 | 13 | 394 | 0 | 0 | 0 | 0 |
| U. Wisconsin-Eau Claire | 394 | 245 | 144 | 0 | 101 | 336 | 245 | 144 | 0 | 101 | 394 | 0 | 0 | 0 | 0 |
| U. West Georgia | 396 | 244 | 185 | 0 | 59 | 358 | 219 | 160 | 0 | 59 | 350 | 25 | 25 | 0 | 0 |
| Indiana State U. | 397 | 243 | 182 | 0 | 61 | 363 | 217 | 156 | 0 | 61 | 346 | 26 | 26 | 0 | 0 |
| Sage Colleges | 398 | 241 | 232 | 0 | 9 | 345 | 232 | 232 | 0 | 0 | 381 | 9 | 0 | 0 | 9 |
| McNeese State U. | 399 | 240 | 180 | 15 | 45 | 341 | 240 | 180 | 15 | 45 | 394 | 0 | 0 | 0 | 0 |
| Chicago State U. | 400 | 235 | 231 | 0 | 4 | 342 | 235 | 231 | 0 | 4 | 394 | 0 | 0 | 0 | 0 |
| CUNY, John Jay C. of Criminal Justice | 401 | 233 | 233 | 0 | 0 | 343 | 233 | 233 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Kansas City U. of Medicine and Biosciences | 402 | 231 | 138 | 0 | 93 | 347 | 231 | 138 | 0 | 93 | 394 | 0 | 0 | 0 | 0 |
| U. Wisconsin-Stout | 402 | 231 | 182 | 49 | 0 | 347 | 231 | 182 | 49 | 0 | 394 | 0 | 0 | 0 | 0 |
| Uniformed Services U. of the Health Sciences | 404 | 227 | 134 | 0 | 93 | 479 | 91 | 19 | 0 | 72 | 257 | 136 | 115 | 0 | 21 |
| Austin Peay State U. | 405 | 225 | 225 | 0 | 0 | 352 | 225 | 225 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Eastern New Mexico U. | 405 | 225 | 78 | 0 | 147 | 352 | 225 | 78 | 0 | 147 | 394 | 0 | 0 | 0 | 0 |
| Prairie View A&M U. | 407 | 224 | 116 | 108 | 0 | 381 | 186 | 106 | 80 | 0 | 325 | 38 | 10 | 28 | 0 |
| Northern Kentucky U. | 408 | 223 | 111 | 0 | 112 | 354 | 223 | 111 | 0 | 112 | 394 | 0 | 0 | 0 | 0 |
| California State U., San Marcos | 409 | 219 | 198 | 0 | 21 | 358 | 219 | 198 | 0 | 21 | 394 | 0 | 0 | 0 | 0 |
| U. Alaska, Anchorage | 410 | 218 | 122 | 32 | 64 | 377 | 189 | 93 | 32 | 64 | 344 | 29 | 29 | 0 | 0 |
| U. Michigan, Flint | 411 | 217 | 104 | 8 | 105 | 409 | 157 | 104 | 8 | 45 | 300 | 60 | 0 | 0 | 60 |
| U. Central Arkansas | 412 | 216 | 110 | 0 | 106 | 394 | 170 | 75 | 0 | 95 | 315 | 46 | 35 | 0 | 11 |
| Jacksonville U. | 413 | 215 | 83 | 0 | 132 | 364 | 215 | 83 | 0 | 132 | 394 | 0 | 0 | 0 | 0 |
| Texas Christian U. | 414 | 211 | 149 | 0 | 62 | 429 | 136 | 85 | 0 | 51 | 283 | 75 | 64 | 0 | 11 |
| Valdosta State U. | 415 | 210 | 80 | 0 | 130 | 367 | 210 | 80 | 0 | 130 | 394 | 0 | 0 | 0 | 0 |
| Manhattan C. | 416 | 207 | 0 | 207 | 0 | 369 | 207 | 0 | 207 | 0 | 394 | 0 | 0 | 0 | 0 |
| Montana Tech of U. Montana | 417 | 206 | 44 | 49 | 113 | 377 | 189 | 27 | 49 | 113 | 366 | 17 | 17 | 0 | 0 |
| Western New England U. | 418 | 200 | 164 | 36 | 0 | 411 | 156 | 120 | 36 | 0 | 319 | 44 | 44 | 0 | 0 |
| Southeastern Louisiana U. | 418 | 200 | 89 | 0 | 111 | 373 | 200 | 89 | 0 | 111 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| C. of Saint Rose | 420 | 198 | 81 | 0 | 117 | 374 | 198 | 81 | 0 | 117 | 394 | 0 | 0 | 0 | 0 |
| U. Indianapolis | 421 | 196 | 152 | 0 | 44 | 376 | 196 | 152 | 0 | 44 | 394 | 0 | 0 | 0 | 0 |
| Citadel Military C. South Carolina | 422 | 189 | 144 | 23 | 22 | 377 | 189 | 144 | 23 | 22 | 394 | 0 | 0 | 0 | 0 |
| Creighton U. | 423 | 186 | 67 | 0 | 119 | 409 | 157 | 38 | 0 | 119 | 344 | 29 | 29 | 0 | 0 |
| Richard Stockton C. New Jersey, The | 424 | 183 | 120 | 0 | 63 | 382 | 183 | 120 | 0 | 63 | 394 | 0 | 0 | 0 | 0 |
| Chatham U. | 425 | 182 | 182 | 0 | 0 | 383 | 182 | 182 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Youngstown State U. | 426 | 181 | 117 | 64 | 0 | 400 | 164 | 100 | 64 | 0 | 366 | 17 | 17 | 0 | 0 |
| Midwestern State U. | 427 | 178 | 178 | 0 | 0 | 385 | 178 | 178 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| C. Charleston | 428 | 177 | 177 | 0 | 0 | 387 | 177 | 177 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Southern Arkansas U. | 428 | 177 | 177 | 0 | 0 | 387 | 177 | 177 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. of Saint Joseph | 430 | 176 | 176 | 0 | 0 | 389 | 176 | 176 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| California State U., Dominguez Hills | 431 | 172 | 172 | 0 | 0 | 392 | 172 | 172 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Pacific U. | 432 | 171 | 112 | 0 | 59 | 435 | 127 | 68 | 0 | 59 | 319 | 44 | 44 | 0 | 0 |
| La Salle U. | 432 | 171 | 79 | 0 | 92 | 393 | 171 | 79 | 0 | 92 | 394 | 0 | 0 | 0 | 0 |
| William Paterson U. | 434 | 170 | 94 | 0 | 76 | 394 | 170 | 94 | 0 | 76 | 394 | 0 | 0 | 0 | 0 |
| Southern U., New Orleans | 435 | 169 | 169 | 0 | 0 | 396 | 169 | 169 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| William Carey U. | 436 | 168 | 103 | 0 | 65 | 465 | 103 | 103 | 0 | 0 | 296 | 65 | 0 | 0 | 65 |
| East Stroudsburg U. Pennsylvania | 436 | 168 | 41 | 0 | 127 | 415 | 148 | 41 | 0 | 107 | 360 | 20 | 0 | 0 | 20 |
| Clark Atlanta U. | 438 | 167 | 167 | 0 | 0 | 518 | 71 | 71 | 0 | 0 | 271 | 96 | 96 | 0 | 0 |
| Texas Southern U. | 439 | 166 | 152 | 0 | 14 | 433 | 131 | 128 | 0 | 3 | 328 | 35 | 24 | 0 | 11 |
| U. Houston-Victoria | 439 | 166 | 166 | 0 | 0 | 397 | 166 | 166 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Robert Morris U. | 441 | 165 | 165 | 0 | 0 | 438 | 126 | 126 | 0 | 0 | 324 | 39 | 39 | 0 | 0 |
| Slippery Rock U. Pennsylvania | 441 | 165 | 118 | 0 | 47 | 398 | 165 | 118 | 0 | 47 | 394 | 0 | 0 | 0 | 0 |
| U. La Verne | 443 | 163 | 163 | 0 | 0 | 402 | 163 | 163 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Meharry Medical C. | 444 | 162 | 125 | 0 | 37 | 435 | 127 | 90 | 0 | 37 | 328 | 35 | 35 | 0 | 0 |
| Eastern U. | 444 | 162 | 162 | 0 | 0 | 403 | 162 | 162 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Loyola Marymount U. | 446 | 160 | 50 | 97 | 13 | 404 | 160 | 50 | 97 | 13 | 394 | 0 | 0 | 0 | 0 |
| Arcadia U. | 447 | 158 | 123 | 0 | 35 | 406 | 158 | 123 | 0 | 35 | 394 | 0 | 0 | 0 | 0 |
| Western Carolina U. | 448 | 154 | 91 | 0 | 63 | 413 | 154 | 91 | 0 | 63 | 394 | 0 | 0 | 0 | 0 |
| Avila U. | 449 | 151 | 151 | 0 | 0 | 414 | 151 | 151 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Norfolk State U. | 450 | 149 | 123 | 26 | 0 | 448 | 117 | 91 | 26 | 0 | 333 | 32 | 32 | 0 | 0 |
| Winston-Salem State U. | 451 | 148 | 9 | 0 | 139 | 639 | 9 | 9 | 0 | 0 | 251 | 139 | 0 | 0 | 139 |
| Radford U. | 452 | 147 | 75 | 0 | 72 | 416 | 147 | 75 | 0 | 72 | 394 | 0 | 0 | 0 | 0 |
| Fort Hays State U. | 453 | 146 | 117 | 0 | 29 | 417 | 146 | 117 | 0 | 29 | 394 | 0 | 0 | 0 | 0 |
| Iona C. | 453 | 146 | 100 | 0 | 46 | 417 | 146 | 100 | 0 | 46 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Worcester State U. | 453 | 146 | 60 | 0 | 86 | 417 | 146 | 60 | 0 | 86 | 394 | 0 | 0 | 0 | 0 |
| U. of the District of Columbia | 456 | 145 | 100 | 12 | 33 | 432 | 134 | 89 | 12 | 33 | 376 | 11 | 11 | 0 | 0 |
| Wayland Baptist U. | 456 | 145 | 145 | 0 | 0 | 420 | 145 | 145 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Hampton U. | 458 | 143 | 97 | 0 | 46 | 453 | 112 | 78 | 0 | 34 | 338 | 31 | 19 | 0 | 12 |
| Southeast Missouri State U. | 459 | 141 | 141 | 0 | 0 | 423 | 141 | 141 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Molloy C. | 460 | 140 | 20 | 0 | 120 | 461 | 105 | 20 | 0 | 85 | 328 | 35 | 0 | 0 | 35 |
| Tuskegee U. | 461 | 138 | 115 | 8 | 15 | 507 | 77 | 54 | 8 | 15 | 299 | 61 | 61 | 0 | 0 |
| Des Moines U., Osteopathic Medical Center | 461 | 138 | 45 | 0 | 93 | 424 | 138 | 45 | 0 | 93 | 394 | 0 | 0 | 0 | 0 |
| SUNY, New Paltz | 461 | 138 | 58 | 14 | 66 | 424 | 138 | 58 | 14 | 66 | 394 | 0 | 0 | 0 | 0 |
| Abilene Christian U. | 464 | 137 | 32 | 0 | 105 | 426 | 137 | 32 | 0 | 105 | 394 | 0 | 0 | 0 | 0 |
| Sul Ross State U. | 464 | 137 | 112 | 0 | 25 | 426 | 137 | 112 | 0 | 25 | 394 | 0 | 0 | 0 | 0 |
| Niagara U. | 466 | 135 | 135 | 0 | 0 | 501 | 81 | 81 | 0 | 0 | 303 | 54 | 54 | 0 | 0 |
| American International C. | 466 | 135 | 135 | 0 | 0 | 465 | 103 | 103 | 0 | 0 | 333 | 32 | 32 | 0 | 0 |
| Lindenwood U. | 466 | 135 | 100 | 0 | 35 | 430 | 135 | 100 | 0 | 35 | 394 | 0 | 0 | 0 | 0 |
| Nicholls State U. | 466 | 135 | 135 | 0 | 0 | 430 | 135 | 135 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Morehouse School of Medicine | 470 | 129 | 74 | 0 | 55 | 495 | 83 | 28 | 0 | 55 | 315 | 46 | 46 | 0 | 0 |
| Lincoln Memorial U. | 470 | 129 | 129 | 0 | 0 | 435 | 127 | 127 | 0 | 0 | 392 | 2 | 2 | 0 | 0 |
| Salem State U. | 472 | 128 | 128 | 0 | 0 | 434 | 128 | 128 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Maryland, Eastern Shore | 473 | 126 | 116 | 0 | 10 | 503 | 79 | 78 | 0 | 1 | 312 | 47 | 38 | 0 | 9 |
| CUNY, C. Staten Island | 474 | 125 | 117 | 8 | 0 | 439 | 125 | 117 | 8 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Wisconsin-Platteville | 474 | 125 | 1 | 124 | 0 | 439 | 125 | 1 | 124 | 0 | 394 | 0 | 0 | 0 | 0 |
| Hawaii Pacific U. | 476 | 124 | 107 | 0 | 17 | 441 | 124 | 107 | 0 | 17 | 394 | 0 | 0 | 0 | 0 |
| SUNY, Upstate Medical U. | 477 | 123 | 123 | 0 | 0 | 649 | 5 | 5 | 0 | 0 | 262 | 118 | 118 | 0 | 0 |
| Florida Gulf Coast U. | 478 | 122 | 79 | 17 | 26 | 442 | 122 | 79 | 17 | 26 | 394 | 0 | 0 | 0 | 0 |
| Commonwealth Medical C. | 479 | 121 | 121 | 0 | 0 | 443 | 121 | 121 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Wisconsin-Green Bay | 479 | 121 | 121 | 0 | 0 | 443 | 121 | 121 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| MGH Institute of Health Professions | 481 | 120 | 0 | 0 | 120 | 445 | 120 | 0 | 0 | 120 | 394 | 0 | 0 | 0 | 0 |
| California State U., Monterey Bay | 482 | 119 | 119 | 0 | 0 | 446 | 119 | 119 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| St. Mary's U., San Antonio | 482 | 119 | 83 | 36 | 0 | 446 | 119 | 83 | 36 | 0 | 394 | 0 | 0 | 0 | 0 |
| Texas A&M International U. | 484 | 117 | 117 | 0 | 0 | 448 | 117 | 117 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Inter American U. Puerto Rico, San German | 485 | 114 | 114 | 0 | 0 | 472 | 96 | 96 | 0 | 0 | 363 | 18 | 18 | 0 | 0 |
| Cameron U. | 485 | 114 | 114 | 0 | 0 | 450 | 114 | 114 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Frostburg State U. | 485 | 114 | 114 | 0 | 0 | 450 | 114 | 114 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Millersville U. Pennsylvania | 488 | 113 | 113 | 0 | 0 | 452 | 113 | 113 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Bastyr U. | 489 | 112 | 112 | 0 | 0 | 453 | 112 | 112 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Clarion U. Pennsylvania | 489 | 112 | 15 | 0 | 97 | 453 | 112 | 15 | 0 | 97 | 394 | 0 | 0 | 0 | 0 |
| Dominican U. California | 491 | 111 | 111 | 0 | 0 | 456 | 111 | 111 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Frederick S. Pardee RAND Graduate School | 492 | 110 | 110 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 269 | 110 | 110 | 0 | 0 |
| SUNY, Buffalo State | 492 | 110 | 97 | 13 | 0 | 457 | 110 | 97 | 13 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. del Turabo | 494 | 107 | 97 | 10 | 0 | 556 | 45 | 35 | 10 | 0 | 298 | 62 | 62 | 0 | 0 |
| Valparaiso U. | 495 | 106 | 106 | 0 | 0 | 460 | 106 | 106 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Hawaii, Hilo | 496 | 105 | 97 | 0 | 8 | 471 | 97 | 97 | 0 | 0 | 384 | 8 | 0 | 0 | 8 |
| Marywood U. | 496 | 105 | 76 | 0 | 29 | 461 | 105 | 76 | 0 | 29 | 394 | 0 | 0 | 0 | 0 |
| Western State Colorado U. | 496 | 105 | 105 | 0 | 0 | 461 | 105 | 105 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Yeshiva U. | 499 | 104 | 104 | 0 | 0 | 618 | 19 | 19 | 0 | 0 | 278 | 85 | 85 | 0 | 0 |
| Northern Michigan U. | 499 | 104 | 81 | 0 | 23 | 464 | 104 | 81 | 0 | 23 | 394 | 0 | 0 | 0 | 0 |
| LeTourneau U. | 501 | 103 | 99 | 4 | 0 | 465 | 103 | 99 | 4 | 0 | 394 | 0 | 0 | 0 | 0 |
| Oregon Institute of Technology | 501 | 103 | 15 | 53 | 35 | 465 | 103 | 15 | 53 | 35 | 394 | 0 | 0 | 0 | 0 |
| Wesleyan U. | 503 | 102 | 102 | 0 | 0 | 571 | 34 | 34 | 0 | 0 | 293 | 68 | 68 | 0 | 0 |
| Metropolitan State U. | 503 | 102 | 96 | 0 | 6 | 469 | 102 | 96 | 0 | 6 | 394 | 0 | 0 | 0 | 0 |
| Tiffin U. | 505 | 98 | 98 | 0 | 0 | 470 | 98 | 98 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| CUNY, Lehman C. | 506 | 96 | 96 | 0 | 0 | 472 | 96 | 96 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Delaware State U. | 507 | 94 | 94 | 0 | 0 | 531 | 59 | 59 | 0 | 0 | 328 | 35 | 35 | 0 | 0 |
| California State U., Bakersfield | 508 | 93 | 93 | 0 | 0 | 476 | 93 | 93 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Texas, Permian Basin | 508 | 93 | 70 | 2 | 21 | 476 | 93 | 70 | 2 | 21 | 394 | 0 | 0 | 0 | 0 |
| City of Hope, Irell and Manella Graduate School of Biological Sciences | 510 | 91 | 91 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 274 | 91 | 91 | 0 | 0 |
| Bloomsburg U. Pennsylvania | 510 | 91 | 21 | 0 | 70 | 479 | 91 | 21 | 0 | 70 | 394 | 0 | 0 | 0 | 0 |
| Fort Valley State U. | 510 | 91 | 21 | 0 | 70 | 479 | 91 | 21 | 0 | 70 | 394 | 0 | 0 | 0 | 0 |
| Quinnipiac U. | 510 | 91 | 91 | 0 | 0 | 479 | 91 | 91 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Springfield C. | 514 | 90 | 86 | 0 | 4 | 497 | 82 | 78 | 0 | 4 | 384 | 8 | 8 | 0 | 0 |
| Bradley U. | 514 | 90 | 38 | 52 | 0 | 483 | 90 | 38 | 52 | 0 | 394 | 0 | 0 | 0 | 0 |
| Evergreen State C. | 514 | 90 | 90 | 0 | 0 | 483 | 90 | 90 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Framingham State C. | 517 | 89 | 89 | 0 | 0 | 485 | 89 | 89 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Wisconsin-Oshkosh | 518 | 88 | 88 | 0 | 0 | 486 | 88 | 88 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Cedars-Sinai Medical Center | 519 | 87 | 87 | 0 | 0 | 556 | 45 | 45 | 0 | 0 | 322 | 42 | 42 | 0 | 0 |
| U. of the Incarnate Word | 519 | 87 | 73 | 0 | 14 | 489 | 86 | 72 | 0 | 14 | 393 | 1 | 1 | 0 | 0 |
| Indiana Institute of Technology | 519 | 87 | 87 | 0 | 0 | 487 | 87 | 87 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Oklahoma Christian U. | 519 | 87 | 0 | 87 | 0 | 487 | 87 | 0 | 87 | 0 | 394 | 0 | 0 | 0 | 0 |
| Cooper Union for the Advancement of Science and Art | 523 | 86 | 0 | 86 | 0 | 489 | 86 | 0 | 86 | 0 | 394 | 0 | 0 | 0 | 0 |
| SUNY, Oswego | 523 | 86 | 38 | 0 | 48 | 489 | 86 | 38 | 0 | 48 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Salus U. | 525 | 85 | 14 | 0 | 71 | 516 | 72 | 1 | 0 | 71 | 373 | 13 | 13 | 0 | 0 |
| U. North Alabama | 525 | 85 | 85 | 0 | 0 | 492 | 85 | 85 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Bowie State U. | 527 | 84 | 84 | 0 | 0 | 567 | 37 | 37 | 0 | 0 | 312 | 47 | 47 | 0 | 0 |
| Virginia State U. | 527 | 84 | 84 | 0 | 0 | 525 | 68 | 68 | 0 | 0 | 369 | 16 | 16 | 0 | 0 |
| Texas A&M U.-Central Texas | 527 | 84 | 84 | 0 | 0 | 493 | 84 | 84 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Texas A&M U., San Antonio | 527 | 84 | 73 | 0 | 11 | 493 | 84 | 73 | 0 | 11 | 394 | 0 | 0 | 0 | 0 |
| Shippensburg U. Pennsylvania | 531 | 83 | 83 | 0 | 0 | 495 | 83 | 83 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Canisius C. | 532 | 82 | 60 | 0 | 22 | 497 | 82 | 60 | 0 | 22 | 394 | 0 | 0 | 0 | 0 |
| Jacksonville State U. | 532 | 82 | 82 | 0 | 0 | 497 | 82 | 82 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Bridgewater State U. | 534 | 81 | 81 | 0 | 0 | 501 | 81 | 81 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Gallaudet U. | 535 | 80 | 70 | 0 | 10 | 623 | 16 | 16 | 0 | 0 | 297 | 64 | 54 | 0 | 10 |
| Suffolk U. | 536 | 79 | 74 | 0 | 5 | 647 | 6 | 6 | 0 | 0 | 289 | 73 | 68 | 0 | 5 |
| Xavier U. | 536 | 79 | 53 | 0 | 26 | 541 | 53 | 53 | 0 | 0 | 346 | 26 | 0 | 0 | 26 |
| SUNY, C. Brockport | 536 | 79 | 63 | 0 | 16 | 503 | 79 | 63 | 0 | 16 | 394 | 0 | 0 | 0 | 0 |
| Southern Nazarene U. | 536 | 79 | 79 | 0 | 0 | 503 | 79 | 79 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Guam | 540 | 78 | 78 | 0 | 0 | 506 | 78 | 78 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Mississippi U. for Women | 541 | 77 | 7 | 0 | 70 | 507 | 77 | 7 | 0 | 70 | 394 | 0 | 0 | 0 | 0 |
| Endicott C. | 542 | 76 | 56 | 0 | 20 | 611 | 20 | 20 | 0 | 0 | 302 | 56 | 36 | 0 | 20 |
| Monmouth U. | 542 | 76 | 53 | 23 | 0 | 510 | 76 | 53 | 23 | 0 | 394 | 0 | 0 | 0 | 0 |
| Memorial Sloan Kettering Cancer Center | 544 | 75 | 75 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 283 | 75 | 75 | 0 | 0 |
| SUNY, C. Cortland | 544 | 75 | 2 | 0 | 73 | 511 | 75 | 2 | 0 | 73 | 394 | 0 | 0 | 0 | 0 |
| Oklahoma City U. | 546 | 74 | 52 | 0 | 22 | 544 | 52 | 52 | 0 | 0 | 355 | 22 | 0 | 0 | 22 |
| South Carolina State U. | 546 | 74 | 0 | 0 | 74 | 513 | 74 | 0 | 0 | 74 | 394 | 0 | 0 | 0 | 0 |
| Charles R. Drew U. of Medicine and Science | 548 | 73 | 28 | 0 | 45 | 515 | 73 | 28 | 0 | 45 | 394 | 0 | 0 | 0 | 0 |
| Kettering U. | 549 | 72 | 0 | 72 | 0 | 516 | 72 | 0 | 72 | 0 | 394 | 0 | 0 | 0 | 0 |
| Gannon U. | 550 | 71 | 27 | 44 | 0 | 518 | 71 | 27 | 44 | 0 | 394 | 0 | 0 | 0 | 0 |
| Minnesota State U., Moorhead | 550 | 71 | 26 | 0 | 45 | 518 | 71 | 26 | 0 | 45 | 394 | 0 | 0 | 0 | 0 |
| SUNY, Fredonia | 550 | 71 | 14 | 0 | 57 | 518 | 71 | 14 | 0 | 57 | 394 | 0 | 0 | 0 | 0 |
| Aurora U. | 553 | 70 | 63 | 0 | 7 | 522 | 70 | 63 | 0 | 7 | 394 | 0 | 0 | 0 | 0 |
| Rivier U. | 553 | 70 | 56 | 0 | 14 | 522 | 70 | 56 | 0 | 14 | 394 | 0 | 0 | 0 | 0 |
| Western U. of Health Sciences | 555 | 69 | 54 | 0 | 15 | 524 | 69 | 54 | 0 | 15 | 394 | 0 | 0 | 0 | 0 |
| Coastal Carolina U. | 556 | 68 | 68 | 0 | 0 | 533 | 57 | 57 | 0 | 0 | 376 | 11 | 11 | 0 | 0 |
| DeSales U. | 556 | 68 | 68 | 0 | 0 | 525 | 68 | 68 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Georgia C. and State U. | 558 | 66 | 23 | 0 | 43 | 527 | 66 | 23 | 0 | 43 | 394 | 0 | 0 | 0 | 0 |
| New Mexico Highlands U. | 558 | 66 | 66 | 0 | 0 | 527 | 66 | 66 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Widener U. | 560 | 64 | 0 | 26 | 38 | 595 | 26 | 0 | 26 | 0 | 325 | 38 | 0 | 0 | 38 |
| Albany Medical C. | 561 | 63 | 63 | 0 | 0 | 626 | 15 | 15 | 0 | 0 | 310 | 48 | 48 | 0 | 0 |
| Edinboro U. Pennsylvania | 562 | 62 | 21 | 0 | 41 | 529 | 62 | 21 | 0 | 41 | 394 | 0 | 0 | 0 | 0 |
| Caldwell U. | 563 | 58 | 58 | 0 | 0 | 564 | 42 | 42 | 0 | 0 | 369 | 16 | 16 | 0 | 0 |
| Arkansas Tech U. | 563 | 58 | 49 | 9 | 0 | 532 | 58 | 49 | 9 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Arkansas, Pine Bluff | 565 | 57 | 57 | 0 | 0 | 541 | 53 | 53 | 0 | 0 | 391 | 4 | 4 | 0 | 0 |
| U. of Mary Hardin Baylor | 565 | 57 | 57 | 0 | 0 | 533 | 57 | 57 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Roger Williams U. | 567 | 56 | 56 | 0 | 0 | 535 | 56 | 56 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Weber State U. | 567 | 56 | 44 | 12 | 0 | 535 | 56 | 44 | 12 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Montevallo | 569 | 55 | 0 | 0 | 55 | 537 | 55 | 0 | 0 | 55 | 394 | 0 | 0 | 0 | 0 |
| U. of Saint Mary | 569 | 55 | 55 | 0 | 0 | 537 | 55 | 55 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Fayetteville State U. | 571 | 54 | 54 | 0 | 0 | 539 | 54 | 54 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Kentucky State U. | 571 | 54 | 54 | 0 | 0 | 539 | 54 | 54 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Vanguard U. of Southern California | 573 | 53 | 53 | 0 | 0 | 541 | 53 | 53 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Biola U. | 574 | 52 | 52 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 307 | 52 | 52 | 0 | 0 |
| Cold Spring Harbor Laboratory | 574 | 52 | 52 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 307 | 52 | 52 | 0 | 0 |
| St. Thomas U. | 574 | 52 | 39 | 0 | 13 | 544 | 52 | 39 | 0 | 13 | 394 | 0 | 0 | 0 | 0 |
| U. South Florida, Saint Petersburg | 577 | 51 | 51 | 0 | 0 | 546 | 51 | 51 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Winthrop U. | 577 | 51 | 51 | 0 | 0 | 546 | 51 | 51 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Andrews U. | 579 | 50 | 50 | 0 | 0 | 643 | 8 | 8 | 0 | 0 | 322 | 42 | 42 | 0 | 0 |
| Wilkes U. | 579 | 50 | 5 | 9 | 36 | 629 | 14 | 5 | 9 | 0 | 327 | 36 | 0 | 0 | 36 |
| Florida Polytechnic U. | 579 | 50 | 27 | 23 | 0 | 548 | 50 | 27 | 23 | 0 | 394 | 0 | 0 | 0 | 0 |
| John Carroll U. | 582 | 49 | 49 | 0 | 0 | 549 | 49 | 49 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. of the Virgin Islands | 582 | 49 | 49 | 0 | 0 | 549 | 49 | 49 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| California U. of Science and Medicine | 584 | 48 | 48 | 0 | 0 | 552 | 48 | 48 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Fitchburg State U. | 585 | 47 | 47 | 0 | 0 | 553 | 47 | 47 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Longwood U. | 586 | 46 | 0 | 0 | 46 | 555 | 46 | 0 | 0 | 46 | 394 | 0 | 0 | 0 | 0 |
| Alfred U. | 587 | 45 | 0 | 45 | 0 | 585 | 28 | 0 | 28 | 0 | 366 | 17 | 0 | 17 | 0 |
| Plymouth State U. | 587 | 45 | 45 | 0 | 0 | 556 | 45 | 45 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. West Alabama | 587 | 45 | 45 | 0 | 0 | 556 | 45 | 45 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| California State U., Stanislaus | 590 | 44 | 44 | 0 | 0 | 560 | 44 | 44 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Toyota Technological Institute, Chicago | 591 | 43 | 43 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 321 | 43 | 43 | 0 | 0 |
| Bard C. | 591 | 43 | 43 | 0 | 0 | 561 | 43 | 43 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Bethune-Cookman U. | 591 | 43 | 30 | 0 | 13 | 561 | 43 | 30 | 0 | 13 | 394 | 0 | 0 | 0 | 0 |
| Truman State U. | 591 | 43 | 0 | 0 | 43 | 561 | 43 | 0 | 0 | 43 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Ithaca C. | 595 | 41 | 41 | 0 | 0 | 565 | 41 | 41 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Texas Health Science Center, Tyler | 596 | 37 | 10 | 0 | 27 | 567 | 37 | 10 | 0 | 27 | 394 | 0 | 0 | 0 | 0 |
| Calvin C. | 597 | 36 | 0 | 0 | 36 | 569 | 36 | 0 | 0 | 36 | 394 | 0 | 0 | 0 | 0 |
| Smith C. | 597 | 36 | 10 | 0 | 26 | 569 | 36 | 10 | 0 | 26 | 394 | 0 | 0 | 0 | 0 |
| Van Andel Institute | 599 | 34 | 34 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 332 | 34 | 34 | 0 | 0 |
| Bryn Mawr C. | 599 | 34 | 34 | 0 | 0 | 656 | 3 | 3 | 0 | 0 | 338 | 31 | 31 | 0 | 0 |
| Bemidji State U. | 599 | 34 | 34 | 0 | 0 | 571 | 34 | 34 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Christopher Newport U. | 602 | 33 | 33 | 0 | 0 | 574 | 33 | 33 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Fisk U. | 602 | 33 | 33 | 0 | 0 | 574 | 33 | 33 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Mills C. | 602 | 33 | 33 | 0 | 0 | 574 | 33 | 33 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Gonzaga U. | 605 | 32 | 22 | 10 | 0 | 578 | 32 | 22 | 10 | 0 | 394 | 0 | 0 | 0 | 0 |
| Oklahoma State U., Center for Health Sciences | 606 | 31 | 31 | 0 | 0 | 637 | 10 | 10 | 0 | 0 | 356 | 21 | 21 | 0 | 0 |
| American Museum of Natural History | 606 | 31 | 31 | 0 | 0 | 626 | 15 | 15 | 0 | 0 | 369 | 16 | 16 | 0 | 0 |
| Saint Martin's U. | 606 | 31 | 12 | 19 | 0 | 579 | 31 | 12 | 19 | 0 | 394 | 0 | 0 | 0 | 0 |
| Savannah State U. | 606 | 31 | 31 | 0 | 0 | 579 | 31 | 31 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Sanford-Burnham Medical Research Institute | 610 | 30 | 30 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 341 | 30 | 30 | 0 | 0 |
| Colorado State U., Pueblo | 611 | 29 | 18 | 11 | 0 | 581 | 29 | 18 | 11 | 0 | 394 | 0 | 0 | 0 | 0 |
| Pontifical Catholic U. Puerto Rico, Mayaguez | 611 | 29 | 29 | 0 | 0 | 581 | 29 | 29 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Central del Caribe | 613 | 28 | 28 | 0 | 0 | 657 | 2 | 2 | 0 | 0 | 346 | 26 | 26 | 0 | 0 |
| Morehead State U. | 613 | 28 | 28 | 0 | 0 | 585 | 28 | 28 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Point Loma Nazarene U. | 613 | 28 | 28 | 0 | 0 | 585 | 28 | 28 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Rhode Island C. | 613 | 28 | 28 | 0 | 0 | 585 | 28 | 28 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Alaska Pacific U. | 617 | 27 | 27 | 0 | 0 | 590 | 27 | 27 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Loras C. | 617 | 27 | 27 | 0 | 0 | 590 | 27 | 27 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Milwaukee School of Engineering | 617 | 27 | 0 | 27 | 0 | 590 | 27 | 0 | 27 | 0 | 394 | 0 | 0 | 0 | 0 |
| San Juan Bautista School of Medicine | 617 | 27 | 0 | 0 | 27 | 590 | 27 | 0 | 0 | 27 | 394 | 0 | 0 | 0 | 0 |
| Williams C. | 617 | 27 | 27 | 0 | 0 | 590 | 27 | 27 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| New England C. of Optometry | 622 | 26 | 26 | 0 | 0 | 595 | 26 | 26 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Southern Oregon U. | 622 | 26 | 26 | 0 | 0 | 595 | 26 | 26 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Drew U. | 624 | 25 | 4 | 0 | 21 | 647 | 6 | 4 | 0 | 2 | 362 | 19 | 0 | 0 | 19 |
| SUNY, C. of Optometry | 624 | 25 | 25 | 0 | 0 | 633 | 11 | 11 | 0 | 0 | 372 | 14 | 14 | 0 | 0 |
| Delta State U. | 624 | 25 | 25 | 0 | 0 | 598 | 25 | 25 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. South Carolina, Aiken | 624 | 25 | 25 | 0 | 0 | 598 | 25 | 25 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Rosalind Franklin U. of Medicine and Science | 628 | 24 | 24 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 354 | 24 | 24 | 0 | 0 |
| Bucknell U. | 628 | 24 | 16 | 8 | 0 | 600 | 24 | 16 | 8 | 0 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| Kutztown U. Pennsylvania | 630 | 23 | 23 | 0 | 0 | 601 | 23 | 23 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| SUNY, C. Plattsburgh | 630 | 23 | 23 | 0 | 0 | 601 | 23 | 23 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| SUNY, Oneonta | 630 | 23 | 23 | 0 | 0 | 601 | 23 | 23 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Lincoln U., Jefferson City | 633 | 22 | 22 | 0 | 0 | 604 | 22 | 22 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Rose-Hulman Institute of Technology | 633 | 22 | 0 | 22 | 0 | 604 | 22 | 0 | 22 | 0 | 394 | 0 | 0 | 0 | 0 |
| Elizabeth City State U. | 635 | 21 | 21 | 0 | 0 | 606 | 21 | 21 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Inter American U. Puerto Rico, Fajardo | 635 | 21 | 21 | 0 | 0 | 606 | 21 | 21 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Salisbury U. | 635 | 21 | 21 | 0 | 0 | 606 | 21 | 21 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Arkansas, Monticello | 635 | 21 | 21 | 0 | 0 | 606 | 21 | 21 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Southern Maine | 635 | 21 | 21 | 0 | 0 | 606 | 21 | 21 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Alabama State U. | 640 | 20 | 20 | 0 | 0 | 639 | 9 | 9 | 0 | 0 | 376 | 11 | 11 | 0 | 0 |
| Albany C. of Pharmacy and Health Sciences | 640 | 20 | 8 | 0 | 12 | 611 | 20 | 8 | 0 | 12 | 394 | 0 | 0 | 0 | 0 |
| Georgia Southwestern State U. | 640 | 20 | 20 | 0 | 0 | 611 | 20 | 20 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Missouri Western State U. | 640 | 20 | 20 | 0 | 0 | 611 | 20 | 20 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Northwestern Polytechnic U. | 640 | 20 | 18 | 2 | 0 | 611 | 20 | 18 | 2 | 0 | 394 | 0 | 0 | 0 | 0 |
| Northwestern State U. Louisiana | 640 | 20 | 20 | 0 | 0 | 611 | 20 | 20 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| West Virginia State U. | 640 | 20 | 20 | 0 | 0 | 611 | 20 | 20 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Furman U. | 647 | 19 | 7 | 0 | 12 | 618 | 19 | 7 | 0 | 12 | 394 | 0 | 0 | 0 | 0 |
| U. Wisconsin-Parkside | 648 | 18 | 18 | 0 | 0 | 620 | 18 | 18 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Mississippi Valley State U. | 649 | 17 | 7 | 0 | 10 | 622 | 17 | 7 | 0 | 10 | 394 | 0 | 0 | 0 | 0 |
| U.S. Merchant Marine Academy | 650 | 16 | 0 | 16 | 0 | 623 | 16 | 0 | 16 | 0 | 394 | 0 | 0 | 0 | 0 |
| Wagner C. | 650 | 16 | 16 | 0 | 0 | 623 | 16 | 16 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. Portland | 652 | 15 | 0 | 15 | 0 | 626 | 15 | 0 | 15 | 0 | 394 | 0 | 0 | 0 | 0 |
| Tougaloo C. | 653 | 14 | 14 | 0 | 0 | 629 | 14 | 14 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Northeastern Ohio Universities, C. of Medicine | 654 | 13 | 13 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 373 | 13 | 13 | 0 | 0 |
| Claflin U. | 655 | 11 | 11 | 0 | 0 | 633 | 11 | 11 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Marshall B. Ketchum U. | 655 | 11 | 11 | 0 | 0 | 633 | 11 | 11 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Montana State U., Billings | 655 | 11 | 11 | 0 | 0 | 633 | 11 | 11 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| SUNY, Potsdam | 658 | 10 | 0 | 0 | 10 | 637 | 10 | 0 | 0 | 10 | 394 | 0 | 0 | 0 | 0 |
| Elmezzi Graduate School of Molecular Medicine | 659 | 9 | 9 | 0 | 0 | 662 | 0 | 0 | 0 | 0 | 381 | 9 | 9 | 0 | 0 |
| Western Connecticut State U. | 659 | 9 | 9 | 0 | 0 | 639 | 9 | 9 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Cabrini U. | 661 | 8 | 8 | 0 | 0 | 643 | 8 | 8 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Vermont Technical C. | 661 | 8 | 0 | 8 | 0 | 643 | 8 | 0 | 8 | 0 | 394 | 0 | 0 | 0 | 0 |
| U. of Saint Francis, Fort Wayne | 663 | 7 | 5 | 0 | 2 | 646 | 7 | 5 | 0 | 2 | 394 | 0 | 0 | 0 | 0 |
| Point Park U. | 664 | 5 | 5 | 0 | 0 | 649 | 5 | 5 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |

TABLE 5-4

## Institutional rankings for graduate students: 2019

(Number)

| Institution | All graduate students | | | | | Master's students | | | | | Doctoral students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health | Rank | Total | Science | Engineering | Health |
| St. Francis C. | 664 | 5 | 5 | 0 | 0 | 649 | 5 | 5 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Alderson-Broaddus U. | 666 | 4 | 4 | 0 | 0 | 652 | 4 | 4 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Black Hills State U. | 666 | 4 | 4 | 0 | 0 | 652 | 4 | 4 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Butler U. | 666 | 4 | 0 | 0 | 4 | 652 | 4 | 0 | 0 | 4 | 394 | 0 | 0 | 0 | 0 |
| Marietta C. | 666 | 4 | 4 | 0 | 0 | 652 | 4 | 4 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Goucher C. | 670 | 2 | 2 | 0 | 0 | 657 | 2 | 2 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| North Central C. | 670 | 2 | 2 | 0 | 0 | 657 | 2 | 2 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Wesley C. | 670 | 2 | 2 | 0 | 0 | 657 | 2 | 2 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |
| Sitting Bull C. | 673 | 1 | 1 | 0 | 0 | 661 | 1 | 1 | 0 | 0 | 394 | 0 | 0 | 0 | 0 |

[a] Totals for "all institutions" include data imputed for nonresponding institutions; data imputed for nonresponding institutions are not shown separately.
[b] In 2019, U. Maryland Baltimore merged with U. Maryland, College Park
[c] In 2019, Western Michigan U., Homer Stryker School of Medicine merged with Western Michigan U.

**Note(s):**
Sorted by overall number of graduate students. Tied institutions are ranked first by number of doctoral students and then alphabetically.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| All institutions[a] | - | 66,247 | 38,503 | 8,266 | 19,478 |
| Harvard U. | 1 | 6,029 | 2,377 | 242 | 3,410 |
| Stanford U. | 2 | 2,454 | 1,213 | 296 | 945 |
| Johns Hopkins U. | 3 | 1,807 | 625 | 140 | 1,042 |
| Massachusetts Institute of Technology | 4 | 1,433 | 795 | 638 | 0 |
| U. California, Berkeley | 5 | 1,397 | 1,004 | 354 | 39 |
| U. Michigan | 6 | 1,356 | 721 | 224 | 411 |
| Columbia U. in the City of New York | 7 | 1,351 | 511 | 149 | 691 |
| U. Minnesota | 8 | 1,306 | 686 | 144 | 476 |
| U. California, San Diego | 9 | 1,242 | 574 | 154 | 514 |
| Yale U. | 10 | 1,221 | 646 | 86 | 489 |
| U. California, San Francisco | 11 | 1,180 | 280 | 58 | 842 |
| U. Pennsylvania | 12 | 1,150 | 632 | 115 | 403 |
| Cornell U. | 13 | 1,089 | 600 | 136 | 353 |
| U. Washington | 14 | 1,004 | 533 | 99 | 372 |
| Northwestern U. | 15 | 944 | 509 | 156 | 279 |
| U. California, Los Angeles | 16 | 931 | 560 | 132 | 239 |
| U. California, Davis | 17 | 865 | 600 | 102 | 163 |
| U. Pittsburgh | 18 | 789 | 274 | 61 | 454 |
| New York U. | 19 | 774 | 589 | 23 | 162 |
| U. North Carolina, Chapel Hill | 20 | 752 | 416 | 11 | 325 |
| U. Wisconsin-Madison | 21 | 750 | 431 | 102 | 217 |
| Washington U., Saint Louis | 22 | 732 | 331 | 44 | 357 |
| Duke U. | 23 | 714 | 434 | 125 | 155 |
| Mayo Clinic, Mayo Graduate School | 24 | 694 | 138 | 27 | 529 |
| Ohio State U. | 25 | 693 | 304 | 104 | 285 |
| California Institute of Technology | 26 | 681 | 540 | 141 | 0 |
| U. Florida | 27 | 675 | 370 | 57 | 248 |
| Icahn School of Medicine at Mt. Sinai | 28 | 662 | 662 | 0 | 0 |
| Princeton U. | 29 | 660 | 519 | 141 | 0 |
| U. Colorado | 29 | 660 | 386 | 68 | 206 |
| Michigan State U. | 31 | 619 | 533 | 47 | 39 |
| U. Texas M. D. Anderson Cancer Center | 32 | 593 | 27 | 0 | 566 |
| U. Chicago | 33 | 565 | 475 | 0 | 90 |
| U. Texas Southwestern Medical Center | 33 | 565 | 303 | 0 | 262 |
| Emory U. | 35 | 558 | 255 | 21 | 282 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| U. Maryland, College Park[b] | 36 | 519 | 369 | 101 | 49 |
| Pennsylvania State U. | 37 | 510 | 372 | 103 | 35 |
| Baylor C. of Medicine | 38 | 500 | 403 | 0 | 97 |
| U. Texas, Austin | 39 | 491 | 303 | 140 | 48 |
| Vanderbilt U. | 40 | 487 | 273 | 45 | 169 |
| U. Illinois, Urbana-Champaign | 41 | 474 | 354 | 105 | 15 |
| Texas A&M U. | 42 | 468 | 328 | 109 | 31 |
| North Carolina State U. | 43 | 464 | 274 | 94 | 96 |
| Purdue U. | 44 | 462 | 252 | 144 | 66 |
| U. Arizona | 45 | 461 | 369 | 49 | 43 |
| U. Southern California | 46 | 456 | 228 | 57 | 171 |
| Indiana U. | 47 | 434 | 262 | 16 | 156 |
| Rutgers, State U. New Jersey | 48 | 403 | 339 | 27 | 37 |
| U. Virginia | 49 | 390 | 248 | 53 | 89 |
| U. California, Irvine | 50 | 376 | 245 | 49 | 82 |
| Georgia Institute of Technology | 51 | 370 | 164 | 206 | 0 |
| Scripps Research Institute | 52 | 349 | 349 | 0 | 0 |
| U. Utah | 53 | 340 | 224 | 39 | 77 |
| Boston U. | 54 | 336 | 198 | 58 | 80 |
| U. Cincinnati | 55 | 323 | 115 | 7 | 201 |
| Arizona State U. | 56 | 319 | 245 | 69 | 5 |
| U. Iowa | 57 | 317 | 120 | 11 | 186 |
| U. California, Santa Barbara | 58 | 309 | 213 | 96 | 0 |
| U. South Florida, Tampa | 59 | 296 | 236 | 20 | 40 |
| SUNY, U. Buffalo | 60 | 290 | 231 | 29 | 30 |
| SUNY, Stony Brook U. | 61 | 288 | 213 | 23 | 52 |
| Oregon Health and Science U. | 62 | 283 | 241 | 13 | 29 |
| U. Massachusetts, Medical School | 63 | 279 | 279 | 0 | 0 |
| U. Alabama, Birmingham | 64 | 276 | 128 | 3 | 145 |
| Tufts U. | 65 | 272 | 187 | 74 | 11 |
| Iowa State U. | 66 | 264 | 150 | 40 | 74 |
| Florida International U. | 67 | 260 | 177 | 52 | 31 |
| U. Miami | 68 | 259 | 126 | 5 | 128 |
| Albert Einstein C. of Medicine | 69 | 258 | 182 | 0 | 76 |
| Rockefeller U. | 70 | 257 | 257 | 0 | 0 |
| Florida State U. | 71 | 254 | 230 | 23 | 1 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| Colorado State U., Fort Collins | 72 | 252 | 151 | 19 | 82 |
| U. California, Riverside | 73 | 246 | 206 | 40 | 0 |
| U. Connecticut | 74 | 245 | 159 | 30 | 56 |
| U. Georgia | 75 | 242 | 189 | 11 | 42 |
| Carnegie Mellon U. | 76 | 236 | 147 | 89 | 0 |
| U. Rochester | 77 | 228 | 118 | 17 | 93 |
| U. Oklahoma | 78 | 226 | 143 | 38 | 45 |
| U. Missouri, Columbia | 79 | 225 | 146 | 14 | 65 |
| U. Kentucky | 80 | 223 | 180 | 12 | 31 |
| U. Illinois, Chicago | 81 | 222 | 110 | 17 | 95 |
| City of Hope, Irell and Manella Graduate School of Biological Sciences | 82 | 221 | 221 | 0 | 0 |
| Case Western Reserve U. | 83 | 220 | 137 | 24 | 59 |
| Brown U. | 84 | 217 | 188 | 25 | 4 |
| Oregon State U. | 84 | 217 | 154 | 20 | 43 |
| Louisiana State U. | 86 | 212 | 187 | 12 | 13 |
| Virginia Polytechnic Institute and State U. | 87 | 209 | 124 | 75 | 10 |
| Rice U. | 88 | 206 | 134 | 72 | 0 |
| Virginia Commonwealth U. | 89 | 201 | 87 | 35 | 79 |
| U. Houston | 90 | 197 | 118 | 62 | 17 |
| Washington State U. | 91 | 193 | 134 | 27 | 32 |
| U. Texas Health Science Center, San Antonio | 92 | 184 | 111 | 0 | 73 |
| U. Hawaii, Manoa | 93 | 178 | 142 | 23 | 13 |
| U. Texas Health Science Center, Houston | 94 | 176 | 0 | 0 | 176 |
| U. Kansas | 95 | 174 | 92 | 11 | 71 |
| U. Central Florida | 96 | 171 | 76 | 92 | 3 |
| U. Nebraska-Lincoln | 97 | 169 | 137 | 28 | 4 |
| Cold Spring Harbor Laboratory | 98 | 165 | 165 | 0 | 0 |
| Georgetown U. | 99 | 161 | 151 | 0 | 10 |
| Dartmouth C. | 100 | 158 | 148 | 10 | 0 |
| U. Delaware | 100 | 158 | 95 | 58 | 5 |
| U. Massachusetts, Amherst | 102 | 156 | 112 | 42 | 2 |
| Medical U. South Carolina | 103 | 153 | 77 | 0 | 76 |
| Tulane U. | 104 | 152 | 94 | 7 | 51 |
| Cedars-Sinai Medical Center | 105 | 146 | 146 | 0 | 0 |
| Temple U. | 106 | 144 | 100 | 13 | 31 |
| Northeastern U. | 107 | 143 | 80 | 30 | 33 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| U. Notre Dame | 108 | 142 | 88 | 54 | 0 |
| U. Nebraska, Medical Center | 109 | 141 | 70 | 0 | 71 |
| U. Tennessee, Knoxville | 110 | 136 | 83 | 52 | 1 |
| Wayne State U. | 111 | 133 | 81 | 13 | 39 |
| Rensselaer Polytechnic Institute, Troy | 112 | 128 | 55 | 73 | 0 |
| Wake Forest U. | 112 | 128 | 76 | 12 | 40 |
| Kansas State U. | 114 | 124 | 111 | 8 | 5 |
| Medical C. Wisconsin | 115 | 122 | 55 | 12 | 55 |
| Georgia State U. | 116 | 118 | 114 | 0 | 4 |
| Sanford-Burnham Medical Research Institute | 117 | 117 | 117 | 0 | 0 |
| U. Tennessee, Health Science Center | 118 | 113 | 38 | 0 | 75 |
| U. South Carolina | 119 | 107 | 55 | 35 | 17 |
| Texas Tech U. | 120 | 106 | 70 | 22 | 14 |
| U. Texas Medical Branch | 121 | 103 | 58 | 0 | 45 |
| Clemson U. | 122 | 98 | 60 | 38 | 0 |
| Brandeis U. | 123 | 96 | 96 | 0 | 0 |
| U. Arkansas for Medical Sciences | 123 | 96 | 33 | 0 | 63 |
| George Washington U. | 125 | 91 | 61 | 20 | 10 |
| SUNY, U. Albany | 125 | 91 | 44 | 1 | 46 |
| Woods Hole Oceanographic Institution | 125 | 91 | 82 | 9 | 0 |
| U. Oregon | 128 | 88 | 83 | 0 | 5 |
| U. Nevada, Reno | 129 | 87 | 80 | 6 | 1 |
| U. New Mexico | 130 | 86 | 57 | 19 | 10 |
| Drexel U. | 131 | 84 | 49 | 20 | 15 |
| New Jersey Institute of Technology | 131 | 84 | 47 | 37 | 0 |
| U. Texas, Dallas | 131 | 84 | 42 | 39 | 3 |
| U. Texas, San Antonio | 131 | 84 | 70 | 14 | 0 |
| Auburn U. | 135 | 81 | 53 | 19 | 9 |
| U. Texas, Arlington | 136 | 79 | 39 | 38 | 2 |
| Augusta U. | 137 | 75 | 45 | 0 | 30 |
| U. Vermont | 137 | 75 | 49 | 7 | 19 |
| U. Idaho | 139 | 70 | 61 | 8 | 1 |
| U. Mississippi | 139 | 70 | 31 | 6 | 33 |
| U. Arkansas, Fayetteville | 141 | 66 | 42 | 24 | 0 |
| Van Andel Institute | 141 | 66 | 66 | 0 | 0 |
| Syracuse U. | 143 | 64 | 55 | 9 | 0 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| CUNY, City C. | 144 | 63 | 27 | 36 | 0 |
| Colorado School of Mines | 145 | 62 | 13 | 49 | 0 |
| Boston C. | 146 | 61 | 58 | 0 | 3 |
| U. California, Merced | 147 | 57 | 39 | 17 | 1 |
| West Virginia U. | 147 | 57 | 45 | 7 | 5 |
| U. Louisville | 149 | 53 | 26 | 0 | 27 |
| U. New Hampshire | 150 | 52 | 45 | 7 | 0 |
| Oklahoma State U. | 151 | 50 | 37 | 6 | 7 |
| U. Montana | 151 | 50 | 40 | 0 | 10 |
| Utah State U. | 153 | 48 | 38 | 8 | 2 |
| Lehigh U. | 154 | 47 | 19 | 28 | 0 |
| North Dakota State U. | 155 | 46 | 39 | 3 | 4 |
| U. Nevada, Las Vegas | 155 | 46 | 37 | 3 | 6 |
| U. Toledo | 155 | 46 | 40 | 1 | 5 |
| American Museum of Natural History | 158 | 45 | 45 | 0 | 0 |
| Old Dominion U. | 158 | 45 | 22 | 19 | 4 |
| U. Alabama, Tuscaloosa | 158 | 45 | 26 | 19 | 0 |
| U. Louisiana, Lafayette | 158 | 45 | 36 | 4 | 5 |
| U. Wisconsin-Milwaukee | 158 | 45 | 28 | 17 | 0 |
| Mississippi State U. | 163 | 44 | 21 | 16 | 7 |
| Stevens Institute of Technology | 163 | 44 | 16 | 28 | 0 |
| Uniformed Services U. of the Health Sciences | 163 | 44 | 42 | 0 | 2 |
| Loyola U., Chicago | 166 | 43 | 19 | 0 | 24 |
| U. Maryland, Baltimore County | 166 | 43 | 29 | 14 | 0 |
| Montana State U. | 168 | 42 | 37 | 5 | 0 |
| U. North Dakota | 168 | 42 | 35 | 4 | 3 |
| U. North Texas, Denton | 168 | 42 | 31 | 11 | 0 |
| Florida Atlantic U. | 171 | 41 | 33 | 8 | 0 |
| U. Rhode Island | 172 | 39 | 27 | 1 | 11 |
| George Mason U. | 173 | 38 | 26 | 12 | 0 |
| U. Texas, El Paso | 173 | 38 | 31 | 7 | 0 |
| Baylor U. | 175 | 37 | 33 | 4 | 0 |
| U. Alaska, Fairbanks | 175 | 37 | 33 | 4 | 0 |
| U. Memphis | 175 | 37 | 21 | 12 | 4 |
| Southern Methodist U. | 178 | 36 | 23 | 13 | 0 |
| Missouri U. of Science and Technology | 179 | 35 | 13 | 22 | 0 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| Northern Arizona U. | 179 | 35 | 32 | 2 | 1 |
| SUNY, Binghamton U. | 179 | 35 | 28 | 7 | 0 |
| Worcester Polytechnic Institute | 179 | 35 | 20 | 15 | 0 |
| U. Massachusetts, Lowell | 183 | 34 | 18 | 14 | 2 |
| South Dakota State U. | 184 | 33 | 26 | 3 | 4 |
| U. North Carolina, Charlotte | 185 | 32 | 26 | 6 | 0 |
| U. Wyoming | 185 | 32 | 12 | 20 | 0 |
| Chapman U. | 187 | 31 | 22 | 0 | 9 |
| Saint Louis U. | 187 | 31 | 31 | 0 | 0 |
| Jackson State U. | 189 | 30 | 30 | 0 | 0 |
| Boise State U. | 190 | 29 | 17 | 12 | 0 |
| New Mexico State U. | 190 | 29 | 20 | 9 | 0 |
| SUNY, Upstate Medical U. | 192 | 28 | 14 | 0 | 14 |
| Howard U. | 193 | 27 | 17 | 1 | 9 |
| Albany Medical C. | 194 | 26 | 26 | 0 | 0 |
| C. of William and Mary | 194 | 26 | 26 | 0 | 0 |
| East Carolina U. | 196 | 24 | 20 | 2 | 2 |
| Loma Linda U. | 197 | 23 | 23 | 0 | 0 |
| San Diego State U. | 197 | 23 | 19 | 3 | 1 |
| U. North Texas, Health Science Center | 197 | 23 | 22 | 0 | 1 |
| Catholic U. of America | 200 | 22 | 21 | 1 | 0 |
| Marquette U. | 200 | 22 | 11 | 8 | 3 |
| Northeastern Ohio Universities, C. of Medicine | 200 | 22 | 20 | 0 | 2 |
| Rochester Institute of Technology | 200 | 22 | 20 | 2 | 0 |
| U. Akron | 200 | 22 | 11 | 11 | 0 |
| Wesleyan U. | 200 | 22 | 22 | 0 | 0 |
| Eastern Virginia Medical School | 206 | 21 | 2 | 0 | 19 |
| Kent State U. | 207 | 20 | 19 | 0 | 1 |
| U. Maine | 207 | 20 | 16 | 4 | 0 |
| Air Force Institute of Technology | 209 | 19 | 5 | 14 | 0 |
| North Carolina Agricultural and Technical State U. | 209 | 19 | 13 | 6 | 0 |
| U. Denver | 209 | 19 | 14 | 5 | 0 |
| U. South Alabama | 209 | 19 | 17 | 2 | 0 |
| U. South Dakota | 209 | 19 | 19 | 0 | 0 |
| Ohio U. | 214 | 18 | 14 | 4 | 0 |
| U. Missouri, Kansas City | 214 | 18 | 2 | 4 | 12 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| Louisiana Tech U. | 216 | 17 | 5 | 12 | 0 |
| Texas State U. | 216 | 17 | 14 | 3 | 0 |
| U. Massachusetts, Boston | 216 | 17 | 17 | 0 | 0 |
| U. North Carolina, Greensboro | 216 | 17 | 16 | 0 | 1 |
| Western U. of Health Sciences | 216 | 17 | 1 | 0 | 16 |
| Naval Postgraduate School | 221 | 16 | 11 | 5 | 0 |
| U. Dayton | 221 | 16 | 11 | 5 | 0 |
| Creighton U. | 223 | 15 | 15 | 0 | 0 |
| Texas A&M U.-Corpus Christi | 223 | 15 | 11 | 4 | 0 |
| Marshall U. | 225 | 14 | 14 | 0 | 0 |
| Meharry Medical C. | 225 | 14 | 14 | 0 | 0 |
| U. Puerto Rico, Medical Sciences Campus | 225 | 14 | 7 | 0 | 7 |
| Bowling Green State U. | 228 | 13 | 13 | 0 | 0 |
| Central Michigan U. | 228 | 13 | 9 | 0 | 4 |
| Michigan Technological U. | 228 | 13 | 5 | 8 | 0 |
| New York Medical C. | 228 | 13 | 13 | 0 | 0 |
| Nova Southeastern U. | 228 | 13 | 13 | 0 | 0 |
| U. Alabama, Huntsville | 228 | 13 | 12 | 1 | 0 |
| SUNY, Downstate Medical Center | 234 | 12 | 3 | 0 | 9 |
| Portland State U. | 235 | 11 | 7 | 4 | 0 |
| U. Alaska, Anchorage | 235 | 11 | 11 | 0 | 0 |
| U. Southern Mississippi | 235 | 11 | 4 | 5 | 2 |
| U. Guam | 238 | 10 | 10 | 0 | 0 |
| U. Missouri, Saint Louis | 238 | 10 | 10 | 0 | 0 |
| U. Tulsa | 238 | 10 | 2 | 8 | 0 |
| Wright State U. | 238 | 10 | 9 | 1 | 0 |
| Clarkson U. | 242 | 9 | 3 | 6 | 0 |
| Rosalind Franklin U. of Medicine and Science | 242 | 9 | 9 | 0 | 0 |
| Florida A&M U. | 244 | 8 | 2 | 3 | 3 |
| Kennesaw State U. | 244 | 8 | 7 | 0 | 1 |
| New School | 244 | 8 | 8 | 0 | 0 |
| SUNY, C. of Environmental Science and Forestry | 244 | 8 | 8 | 0 | 0 |
| Villanova U. | 244 | 8 | 8 | 0 | 0 |
| Western Michigan U.[c] | 244 | 8 | 5 | 3 | 0 |
| Clark U. | 250 | 7 | 7 | 0 | 0 |
| Cleveland State U. | 250 | 7 | 7 | 0 | 0 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| Morehouse School of Medicine | 250 | 7 | 7 | 0 | 0 |
| San Francisco State U. | 250 | 7 | 6 | 0 | 1 |
| Southern Illinois U., Carbondale | 250 | 7 | 7 | 0 | 0 |
| Duquesne U. | 255 | 6 | 4 | 0 | 2 |
| Miami U. | 255 | 6 | 6 | 0 | 0 |
| Rowan U. | 255 | 6 | 6 | 0 | 0 |
| Tuskegee U. | 255 | 6 | 5 | 0 | 1 |
| U. New England | 255 | 6 | 6 | 0 | 0 |
| U. San Diego | 255 | 6 | 5 | 1 | 0 |
| Morgan State U. | 261 | 5 | 5 | 0 | 0 |
| Smith C. | 261 | 5 | 4 | 1 | 0 |
| SUNY, C. of Optometry | 261 | 5 | 5 | 0 | 0 |
| Texas A&M U.-Kingsville | 261 | 5 | 3 | 2 | 0 |
| A. T. Still U. | 265 | 4 | 4 | 0 | 0 |
| Albany C. of Pharmacy and Health Sciences | 265 | 4 | 0 | 0 | 4 |
| CUNY, Brooklyn C. | 265 | 4 | 4 | 0 | 0 |
| Midwestern U. | 265 | 4 | 1 | 0 | 3 |
| Oakland U. | 265 | 4 | 3 | 0 | 1 |
| Oklahoma State U., Center for Health Sciences | 265 | 4 | 4 | 0 | 0 |
| U. North Carolina, Wilmington | 265 | 4 | 4 | 0 | 0 |
| West Virginia State U. | 265 | 4 | 4 | 0 | 0 |
| Bard C. | 273 | 3 | 3 | 0 | 0 |
| Charles R. Drew U. of Medicine and Science | 273 | 3 | 3 | 0 | 0 |
| East Tennessee State U. | 273 | 3 | 2 | 0 | 1 |
| Florida Institute of Technology | 273 | 3 | 2 | 1 | 0 |
| Fordham U. | 273 | 3 | 3 | 0 | 0 |
| Idaho State U. | 273 | 3 | 2 | 0 | 1 |
| Loyola Marymount U. | 273 | 3 | 3 | 0 | 0 |
| Mercer U. | 273 | 3 | 3 | 0 | 0 |
| Middle Tennessee State U. | 273 | 3 | 3 | 0 | 0 |
| Montana Tech of U. Montana | 273 | 3 | 3 | 0 | 0 |
| Mount Holyoke C. | 273 | 3 | 3 | 0 | 0 |
| South Dakota School of Mines and Technology | 273 | 3 | 2 | 1 | 0 |
| SUNY, Polytechnic Institute | 273 | 3 | 0 | 3 | 0 |
| Toyota Technological Institute, Chicago | 273 | 3 | 3 | 0 | 0 |
| U. Nebraska, Omaha | 273 | 3 | 3 | 0 | 0 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| Alfred U. | 288 | 2 | 0 | 2 | 0 |
| American U. | 288 | 2 | 2 | 0 | 0 |
| Arkansas State U. | 288 | 2 | 2 | 0 | 0 |
| Colorado State U., Pueblo | 288 | 2 | 1 | 1 | 0 |
| Hampton U. | 288 | 2 | 2 | 0 | 0 |
| Illinois State U. | 288 | 2 | 2 | 0 | 0 |
| Murray State U. | 288 | 2 | 2 | 0 | 0 |
| New Mexico Institute of Mining and Technology | 288 | 2 | 2 | 0 | 0 |
| St. John's U., Queens | 288 | 2 | 1 | 0 | 1 |
| Tennessee Technological U. | 288 | 2 | 1 | 1 | 0 |
| Texas A&M U.-Central Texas | 288 | 2 | 2 | 0 | 0 |
| Texas Christian U. | 288 | 2 | 2 | 0 | 0 |
| Trinity U. | 288 | 2 | 2 | 0 | 0 |
| U. Massachusetts, Dartmouth | 288 | 2 | 2 | 0 | 0 |
| U. New Orleans | 288 | 2 | 1 | 1 | 0 |
| U. Wisconsin-Green Bay | 288 | 2 | 2 | 0 | 0 |
| Vassar C. | 288 | 2 | 2 | 0 | 0 |
| Wichita State U. | 288 | 2 | 2 | 0 | 0 |
| Williams C. | 288 | 2 | 2 | 0 | 0 |
| California State U., Long Beach | 307 | 1 | 1 | 0 | 0 |
| Clark Atlanta U. | 307 | 1 | 1 | 0 | 0 |
| CUNY, C. Staten Island | 307 | 1 | 1 | 0 | 0 |
| Delaware State U. | 307 | 1 | 1 | 0 | 0 |
| Furman U. | 307 | 1 | 1 | 0 | 0 |
| Hofstra U. | 307 | 1 | 0 | 1 | 0 |
| Illinois Institute of Technology | 307 | 1 | 1 | 0 | 0 |
| James Madison U. | 307 | 1 | 1 | 0 | 0 |
| John Carroll U. | 307 | 1 | 1 | 0 | 0 |
| Monmouth U. | 307 | 1 | 1 | 0 | 0 |
| New England C. of Optometry | 307 | 1 | 1 | 0 | 0 |
| Norfolk State U. | 307 | 1 | 1 | 0 | 0 |
| Northern Michigan U. | 307 | 1 | 1 | 0 | 0 |
| Savannah State U. | 307 | 1 | 1 | 0 | 0 |
| Texas A&M U.-Commerce | 307 | 1 | 1 | 0 | 0 |
| Texas Southern U. | 307 | 1 | 1 | 0 | 0 |
| U. Alaska, Southeast | 307 | 1 | 1 | 0 | 0 |

TABLE 5-5

## Institutional rankings for postdoctoral appointees: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| U. Central del Caribe | 307 | 1 | 1 | 0 | 0 |
| U. Maryland, Eastern Shore | 307 | 1 | 1 | 0 | 0 |
| U. of the Incarnate Word | 307 | 1 | 0 | 0 | 1 |
| U. of the Virgin Islands | 307 | 1 | 1 | 0 | 0 |
| U. South Florida, Saint Petersburg | 307 | 1 | 1 | 0 | 0 |

[a] Totals for "all institutions" include data imputed for nonresponding institutions; data imputed for nonresponding institutions are not shown separately.
[b] In 2019, U. Maryland Baltimore merged with U. Maryland, College Park.
[c] In 2019, Western Michigan U., Homer Stryker School of Medicine merged with Western Michigan U.

**Note(s):**
Tied institutions are ranked alphabetically.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE 5-6

## Institutional rankings for doctorate-holding nonfaculty researchers: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| All institutions | - | 30,349 | 18,819 | 3,909 | 7,621 |
| Stanford U. | 1 | 1,186 | 733 | 130 | 323 |
| Harvard U. | 2 | 1,118 | 532 | 57 | 529 |
| U. Colorado | 3 | 897 | 704 | 55 | 138 |
| Cornell U. | 4 | 752 | 526 | 100 | 126 |
| U. Minnesota | 5 | 720 | 381 | 91 | 248 |
| U. Wisconsin-Madison | 6 | 710 | 358 | 54 | 298 |
| U. Illinois, Chicago | 7 | 708 | 195 | 26 | 487 |
| U. Michigan | 8 | 686 | 307 | 91 | 288 |
| U. California, Irvine | 9 | 632 | 321 | 70 | 241 |
| Columbia U. in the City of New York | 10 | 624 | 328 | 119 | 177 |
| U. California, Los Angeles | 11 | 567 | 380 | 71 | 116 |
| U. California, Berkeley | 12 | 539 | 426 | 81 | 32 |
| U. California, San Diego | 13 | 522 | 226 | 73 | 223 |
| U. California, Davis | 14 | 516 | 327 | 105 | 84 |
| Duke U. | 15 | 497 | 280 | 63 | 154 |
| U. Maryland, College Park[a] | 16 | 496 | 387 | 84 | 25 |
| U. Washington | 17 | 494 | 393 | 42 | 59 |
| U. Arizona | 18 | 486 | 441 | 39 | 6 |
| U. California, Riverside | 19 | 484 | 449 | 35 | 0 |
| Washington U., Saint Louis | 20 | 464 | 208 | 14 | 242 |
| U. Pennsylvania | 21 | 449 | 212 | 8 | 229 |
| Indiana U. | 22 | 430 | 245 | 9 | 176 |
| U. Texas, Austin | 23 | 412 | 284 | 102 | 26 |
| Ohio State U. | 24 | 410 | 128 | 106 | 176 |
| U. North Carolina, Chapel Hill | 25 | 400 | 219 | 1 | 180 |
| California Institute of Technology | 26 | 316 | 286 | 30 | 0 |
| Case Western Reserve U. | 27 | 300 | 128 | 69 | 103 |
| City of Hope, Irell and Manella Graduate School of Biological Sciences | 28 | 299 | 299 | 0 | 0 |
| New York U. | 29 | 286 | 140 | 7 | 139 |
| U. Miami | 30 | 278 | 143 | 5 | 130 |
| Northwestern U. | 31 | 251 | 88 | 23 | 140 |
| U. Cincinnati | 32 | 247 | 33 | 11 | 203 |
| Oregon Health and Science U. | 33 | 244 | 105 | 15 | 124 |
| U. Oregon | 34 | 243 | 214 | 0 | 29 |
| U. Alabama, Birmingham | 35 | 231 | 95 | 5 | 131 |

TABLE 5-6

## Institutional rankings for doctorate-holding nonfaculty researchers: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| North Carolina State U. | 36 | 230 | 175 | 45 | 10 |
| Princeton U. | 37 | 229 | 199 | 30 | 0 |
| U. Chicago | 38 | 228 | 158 | 0 | 70 |
| Georgia Institute of Technology | 39 | 227 | 72 | 155 | 0 |
| Colorado State U., Fort Collins | 40 | 225 | 195 | 20 | 10 |
| Arizona State U. | 41 | 219 | 162 | 45 | 12 |
| U. California, Santa Barbara | 42 | 218 | 182 | 36 | 0 |
| U. Oklahoma | 43 | 217 | 184 | 16 | 17 |
| Brown U. | 44 | 207 | 185 | 14 | 8 |
| Texas A&M U. | 44 | 207 | 168 | 29 | 10 |
| U. Illinois, Urbana-Champaign | 46 | 196 | 142 | 40 | 14 |
| Georgetown U. | 47 | 193 | 142 | 0 | 51 |
| U. Pittsburgh | 48 | 189 | 64 | 6 | 119 |
| Rockefeller U. | 49 | 188 | 188 | 0 | 0 |
| U. Southern California | 50 | 179 | 93 | 14 | 72 |
| U. Kansas | 51 | 178 | 99 | 15 | 64 |
| Virginia Polytechnic Institute and State U. | 52 | 176 | 100 | 66 | 10 |
| Mayo Clinic, Mayo Graduate School | 53 | 172 | 53 | 10 | 109 |
| U. Arkansas for Medical Sciences | 54 | 170 | 108 | 0 | 62 |
| Texas Tech U. | 55 | 165 | 103 | 31 | 31 |
| U. Virginia | 55 | 165 | 90 | 37 | 38 |
| U. South Florida, Tampa | 57 | 164 | 130 | 18 | 16 |
| Massachusetts Institute of Technology | 58 | 162 | 58 | 104 | 0 |
| U. California, San Francisco | 59 | 161 | 32 | 5 | 124 |
| U. Missouri, Columbia | 59 | 161 | 106 | 21 | 34 |
| U. Iowa | 61 | 150 | 76 | 7 | 67 |
| Purdue U. | 62 | 146 | 54 | 66 | 26 |
| Rutgers, State U. New Jersey | 62 | 146 | 131 | 12 | 3 |
| U. Utah | 64 | 145 | 101 | 15 | 29 |
| Montana State U. | 65 | 144 | 125 | 19 | 0 |
| U. Maryland, Baltimore County | 66 | 142 | 125 | 17 | 0 |
| U. Nevada, Reno | 67 | 134 | 92 | 22 | 20 |
| Scripps Research Institute | 68 | 133 | 133 | 0 | 0 |
| Utah State U. | 69 | 130 | 56 | 72 | 2 |
| U. Rochester | 70 | 121 | 56 | 5 | 60 |
| Sanford-Burnham Medical Research Institute | 71 | 119 | 119 | 0 | 0 |

TABLE 5-6

## Institutional rankings for doctorate-holding nonfaculty researchers: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| U. Louisiana, Lafayette | 72 | 118 | 41 | 59 | 18 |
| U. Texas Medical Branch | 72 | 118 | 84 | 3 | 31 |
| Iowa State U. | 74 | 117 | 97 | 12 | 8 |
| U. Dayton | 74 | 117 | 105 | 12 | 0 |
| U. Maine | 76 | 116 | 91 | 23 | 2 |
| Emory U. | 77 | 114 | 32 | 0 | 82 |
| West Virginia U. | 78 | 111 | 80 | 8 | 23 |
| George Mason U. | 79 | 108 | 84 | 19 | 5 |
| Oregon State U. | 80 | 107 | 87 | 9 | 11 |
| U. New Hampshire | 80 | 107 | 102 | 3 | 2 |
| Tufts U. | 82 | 103 | 74 | 27 | 2 |
| U. Texas, San Antonio | 83 | 102 | 73 | 24 | 5 |
| U. Nebraska-Lincoln | 84 | 92 | 73 | 16 | 3 |
| Vanderbilt U. | 85 | 90 | 50 | 2 | 38 |
| Wayne State U. | 85 | 90 | 46 | 4 | 40 |
| Medical U. South Carolina | 87 | 80 | 44 | 0 | 36 |
| Rice U. | 88 | 79 | 46 | 30 | 3 |
| Medical C. Wisconsin | 89 | 78 | 26 | 4 | 48 |
| Catholic U. of America | 90 | 77 | 77 | 0 | 0 |
| SUNY, Stony Brook U. | 90 | 77 | 51 | 9 | 17 |
| Oklahoma State U. | 92 | 76 | 43 | 8 | 25 |
| U. Louisville | 93 | 75 | 22 | 8 | 45 |
| U. Alabama, Huntsville | 94 | 73 | 52 | 21 | 0 |
| Clemson U. | 95 | 70 | 48 | 19 | 3 |
| SUNY, U. Albany | 95 | 70 | 67 | 0 | 3 |
| U. Montana | 95 | 70 | 56 | 0 | 14 |
| Boston C. | 98 | 68 | 67 | 0 | 1 |
| Brandeis U. | 98 | 68 | 68 | 0 | 0 |
| Johns Hopkins U. | 100 | 67 | 8 | 0 | 59 |
| U. Hawaii, Manoa | 101 | 66 | 61 | 5 | 0 |
| U. Mississippi | 101 | 66 | 7 | 16 | 43 |
| Colorado School of Mines | 103 | 64 | 6 | 58 | 0 |
| U. Tennessee, Knoxville | 104 | 62 | 32 | 30 | 0 |
| U. Texas, Dallas | 105 | 61 | 35 | 23 | 3 |
| Michigan Technological U. | 106 | 60 | 21 | 39 | 0 |
| U. Memphis | 107 | 57 | 46 | 5 | 6 |

TABLE 5-6

## Institutional rankings for doctorate-holding nonfaculty researchers: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| Florida State U. | 108 | 56 | 52 | 3 | 1 |
| New Jersey Institute of Technology | 108 | 56 | 44 | 12 | 0 |
| Old Dominion U. | 110 | 55 | 33 | 22 | 0 |
| Woods Hole Oceanographic Institution | 110 | 55 | 38 | 17 | 0 |
| Rensselaer Polytechnic Institute, Troy | 112 | 54 | 17 | 37 | 0 |
| Louisiana State U. | 113 | 53 | 35 | 9 | 9 |
| North Dakota State U. | 113 | 53 | 37 | 7 | 9 |
| U. Houston | 113 | 53 | 31 | 17 | 5 |
| U. Denver | 116 | 52 | 42 | 10 | 0 |
| Northeastern U. | 117 | 51 | 24 | 16 | 11 |
| SUNY, U. Buffalo | 117 | 51 | 35 | 7 | 9 |
| Florida International U. | 119 | 50 | 33 | 13 | 4 |
| U. California, Merced | 119 | 50 | 26 | 22 | 2 |
| Carnegie Mellon U. | 121 | 46 | 26 | 20 | 0 |
| Loma Linda U. | 122 | 45 | 45 | 0 | 0 |
| Cold Spring Harbor Laboratory | 123 | 44 | 44 | 0 | 0 |
| Morgan State U. | 123 | 44 | 37 | 2 | 5 |
| Michigan State U. | 125 | 43 | 35 | 2 | 6 |
| U. Massachusetts, Amherst | 125 | 43 | 36 | 6 | 1 |
| U. Nevada, Las Vegas | 125 | 43 | 28 | 3 | 12 |
| Kansas State U. | 128 | 42 | 37 | 1 | 4 |
| SUNY, Polytechnic Institute | 128 | 42 | 0 | 42 | 0 |
| Temple U. | 130 | 41 | 28 | 0 | 13 |
| U. South Carolina | 130 | 41 | 12 | 5 | 24 |
| U. Texas Health Science Center, San Antonio | 130 | 41 | 26 | 0 | 15 |
| George Washington U. | 133 | 40 | 25 | 8 | 7 |
| Wake Forest U. | 133 | 40 | 15 | 14 | 11 |
| Auburn U. | 135 | 39 | 28 | 7 | 4 |
| U. Texas, Arlington | 136 | 38 | 14 | 24 | 0 |
| U. Delaware | 137 | 36 | 23 | 10 | 3 |
| U. Tennessee, Health Science Center | 137 | 36 | 12 | 0 | 24 |
| Boston U. | 139 | 35 | 29 | 1 | 5 |
| U. Wisconsin-Milwaukee | 140 | 34 | 30 | 0 | 4 |
| Van Andel Institute | 140 | 34 | 34 | 0 | 0 |
| Dartmouth C. | 142 | 33 | 31 | 2 | 0 |
| New Mexico State U. | 142 | 33 | 31 | 1 | 1 |

TABLE 5-6

## Institutional rankings for doctorate-holding nonfaculty researchers: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| U. Idaho | 142 | 33 | 31 | 2 | 0 |
| Lehigh U. | 145 | 31 | 11 | 20 | 0 |
| Wright State U. | 146 | 30 | 22 | 6 | 2 |
| U. Missouri, Kansas City | 147 | 27 | 10 | 0 | 17 |
| U. South Dakota | 147 | 27 | 23 | 2 | 2 |
| U. Texas, El Paso | 149 | 26 | 11 | 11 | 4 |
| U. Connecticut | 150 | 25 | 17 | 8 | 0 |
| U. North Dakota | 150 | 25 | 23 | 1 | 1 |
| Portland State U. | 152 | 24 | 17 | 7 | 0 |
| SUNY, Downstate Medical Center | 152 | 24 | 4 | 0 | 20 |
| U. Central Florida | 152 | 24 | 14 | 10 | 0 |
| U. Massachusetts, Lowell | 152 | 24 | 11 | 9 | 4 |
| U. North Texas, Denton | 152 | 24 | 20 | 4 | 0 |
| Albert Einstein C. of Medicine | 157 | 23 | 12 | 0 | 11 |
| Florida A&M U. | 157 | 23 | 13 | 0 | 10 |
| Uniformed Services U. of the Health Sciences | 157 | 23 | 22 | 0 | 1 |
| Southern Methodist U. | 160 | 22 | 19 | 3 | 0 |
| Baylor U. | 161 | 19 | 19 | 0 | 0 |
| Mississippi State U. | 161 | 19 | 9 | 7 | 3 |
| SUNY, Binghamton U. | 161 | 19 | 8 | 11 | 0 |
| U. Arkansas, Fayetteville | 161 | 19 | 12 | 7 | 0 |
| Marquette U. | 165 | 18 | 7 | 8 | 3 |
| U. Southern Mississippi | 165 | 18 | 14 | 4 | 0 |
| C. of William and Mary | 167 | 17 | 17 | 0 | 0 |
| Drexel U. | 167 | 17 | 4 | 8 | 5 |
| Mercer U. | 167 | 17 | 4 | 12 | 1 |
| South Dakota School of Mines and Technology | 167 | 17 | 1 | 16 | 0 |
| Boise State U. | 171 | 16 | 11 | 4 | 1 |
| U. Rhode Island | 171 | 16 | 16 | 0 | 0 |
| CUNY, City C. | 173 | 15 | 0 | 15 | 0 |
| U. Massachusetts, Dartmouth | 173 | 15 | 12 | 3 | 0 |
| Wichita State U. | 173 | 15 | 6 | 9 | 0 |
| Rosalind Franklin U. of Medicine and Science | 176 | 14 | 14 | 0 | 0 |
| San Francisco State U. | 176 | 14 | 14 | 0 | 0 |
| U. Georgia | 176 | 14 | 12 | 0 | 2 |
| Albany C. of Pharmacy and Health Sciences | 179 | 13 | 0 | 0 | 13 |

TABLE 5-6

## Institutional rankings for doctorate-holding nonfaculty researchers: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| Missouri U. of Science and Technology | 179 | 13 | 3 | 10 | 0 |
| Ohio U. | 179 | 13 | 7 | 6 | 0 |
| Western U. of Health Sciences | 179 | 13 | 0 | 0 | 13 |
| Air Force Institute of Technology | 183 | 12 | 0 | 12 | 0 |
| Eastern Virginia Medical School | 183 | 12 | 2 | 0 | 10 |
| U. Wyoming | 183 | 12 | 9 | 3 | 0 |
| Worcester Polytechnic Institute | 183 | 12 | 7 | 5 | 0 |
| Morehouse School of Medicine | 187 | 11 | 11 | 0 | 0 |
| U. Akron | 187 | 11 | 5 | 6 | 0 |
| U. Alaska, Fairbanks | 187 | 11 | 11 | 0 | 0 |
| U. Toledo | 187 | 11 | 4 | 2 | 5 |
| California State U., Long Beach | 191 | 10 | 6 | 4 | 0 |
| Cleveland State U. | 191 | 10 | 3 | 7 | 0 |
| Miami U. | 191 | 10 | 10 | 0 | 0 |
| Northern Arizona U. | 191 | 10 | 10 | 0 | 0 |
| South Dakota State U. | 191 | 10 | 5 | 2 | 3 |
| Syracuse U. | 191 | 10 | 2 | 8 | 0 |
| Texas A&M U.-Corpus Christi | 191 | 10 | 9 | 1 | 0 |
| U. Puerto Rico, Medical Sciences Campus | 191 | 10 | 4 | 0 | 6 |
| U. Tulsa | 191 | 10 | 1 | 9 | 0 |
| Chapman U. | 200 | 9 | 5 | 0 | 4 |
| Pennsylvania State U. | 200 | 9 | 6 | 3 | 0 |
| U. North Carolina, Charlotte | 200 | 9 | 7 | 2 | 0 |
| Texas Christian U. | 203 | 8 | 8 | 0 | 0 |
| U. North Carolina, Greensboro | 203 | 8 | 5 | 3 | 0 |
| Kentucky State U. | 205 | 7 | 7 | 0 | 0 |
| California State U., Los Angeles | 206 | 6 | 6 | 0 | 0 |
| Charles R. Drew U. of Medicine and Science | 206 | 6 | 6 | 0 | 0 |
| Clarkson U. | 206 | 6 | 1 | 5 | 0 |
| Florida Atlantic U. | 206 | 6 | 5 | 0 | 1 |
| U. New Mexico | 206 | 6 | 6 | 0 | 0 |
| Lincoln U., Jefferson City | 211 | 5 | 5 | 0 | 0 |
| Midwestern U. | 211 | 5 | 4 | 0 | 1 |
| Rochester Institute of Technology | 211 | 5 | 3 | 2 | 0 |
| Texas Southern U. | 211 | 5 | 1 | 0 | 4 |
| Texas State U. | 211 | 5 | 2 | 3 | 0 |

TABLE 5-6

## Institutional rankings for doctorate-holding nonfaculty researchers: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| U. Missouri, Saint Louis | 211 | 5 | 5 | 0 | 0 |
| U. Wisconsin-Green Bay | 211 | 5 | 5 | 0 | 0 |
| California State U., Fullerton | 218 | 4 | 4 | 0 | 0 |
| Hampton U. | 218 | 4 | 4 | 0 | 0 |
| Louisiana Tech U. | 218 | 4 | 2 | 2 | 0 |
| Marshall U. | 218 | 4 | 4 | 0 | 0 |
| Smith C. | 218 | 4 | 2 | 2 | 0 |
| SUNY, C. of Optometry | 218 | 4 | 4 | 0 | 0 |
| Texas A&M U.-Kingsville | 218 | 4 | 4 | 0 | 0 |
| U. Texas Southwestern Medical Center | 218 | 4 | 2 | 0 | 2 |
| East Carolina U. | 226 | 3 | 2 | 0 | 1 |
| Nova Southeastern U. | 226 | 3 | 3 | 0 | 0 |
| Southern Illinois U., Carbondale | 226 | 3 | 3 | 0 | 0 |
| U. Baltimore | 226 | 3 | 3 | 0 | 0 |
| U. Guam | 226 | 3 | 3 | 0 | 0 |
| U. Nebraska, Omaha | 226 | 3 | 3 | 0 | 0 |
| U. North Carolina, Wilmington | 226 | 3 | 3 | 0 | 0 |
| West Virginia State U. | 226 | 3 | 3 | 0 | 0 |
| Bard C. | 234 | 2 | 2 | 0 | 0 |
| Brigham Young U. | 234 | 2 | 2 | 0 | 0 |
| Clark Atlanta U. | 234 | 2 | 2 | 0 | 0 |
| Creighton U. | 234 | 2 | 2 | 0 | 0 |
| Duquesne U. | 234 | 2 | 0 | 0 | 2 |
| Fordham U. | 234 | 2 | 2 | 0 | 0 |
| Grand Valley State U. | 234 | 2 | 1 | 1 | 0 |
| Idaho State U. | 234 | 2 | 1 | 1 | 0 |
| Kennesaw State U. | 234 | 2 | 2 | 0 | 0 |
| Texas A&M U.-Central Texas | 234 | 2 | 2 | 0 | 0 |
| U. Florida | 234 | 2 | 0 | 0 | 2 |
| U. New England | 234 | 2 | 0 | 0 | 2 |
| U. of the Virgin Islands | 234 | 2 | 2 | 0 | 0 |
| Yale U. | 234 | 2 | 0 | 0 | 2 |
| Alfred U. | 248 | 1 | 0 | 1 | 0 |
| California State U., Monterey Bay | 248 | 1 | 1 | 0 | 0 |
| Clark U. | 248 | 1 | 1 | 0 | 0 |
| Colorado State U., Pueblo | 248 | 1 | 1 | 0 | 0 |

TABLE 5-6

## Institutional rankings for doctorate-holding nonfaculty researchers: 2019

(Number)

| Institution | Rank | Total | Science | Engineering | Health |
|---|---|---|---|---|---|
| CUNY, C. Staten Island | 248 | 1 | 1 | 0 | 0 |
| Howard U. | 248 | 1 | 1 | 0 | 0 |
| James Madison U. | 248 | 1 | 1 | 0 | 0 |
| Montana Tech of U. Montana | 248 | 1 | 1 | 0 | 0 |
| Norfolk State U. | 248 | 1 | 1 | 0 | 0 |
| Oakland U. | 248 | 1 | 0 | 0 | 1 |
| Rowan U. | 248 | 1 | 1 | 0 | 0 |
| Tennessee Technological U. | 248 | 1 | 1 | 0 | 0 |
| Tuskegee U. | 248 | 1 | 1 | 0 | 0 |
| U. South Alabama | 248 | 1 | 1 | 0 | 0 |
| U. Vermont | 248 | 1 | 0 | 0 | 1 |
| Western Michigan U.[b] | 248 | 1 | 1 | 0 | 0 |

[a] In 2019, U. Maryland Baltimore merged with U. Maryland, College Park

[b] In 2019, Western Michigan U., Homer Stryker School of Medicine merged with Western Michigan U.

**Note(s):**

Tied institutions are ranked alphabetically.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

# Technical Notes

## Survey Overview (2019 Survey Cycle)

*Purpose.* The Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) is an annual census of all academic institutions in the United States and its territories (Guam and Puerto Rico) granting research-based master's degrees or doctorates in science, engineering, or selected health (SEH) fields as of the fall of the survey year. Sponsored by the National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation and by the National Institutes of Health (NIH), the GSS collects counts of graduate students, postdoctoral researchers (postdocs), and other doctorate-holding nonfaculty researchers (NFRs) at these institutions by demographic and other characteristics, such as source and mechanism of financial support. Results are used to assess shifts in graduate enrollment, shifts in postdoc and NFR appointments, and trends in financial support.

*Data collection authority.* The information collected by the GSS is solicited under the authority of the National Science Foundation Act of 1950, as amended, and the America COMPETES Reauthorization Act of 2010. The Office of Management and Budget (OMB) control number is 3145-0062 and expires on 31 August 2023.

*Survey contractor*. RTI International.

*Survey sponsors.* NCSES and NIH.

## Key Survey Information

*Frequency*. Annual.

*Initial survey year.* 1966.

*Reference period.* Fall 2019.

*Response unit*. Organizational units (e.g., academic departments, degree-granting programs, university-affiliated research centers, and health care facilities) in academic institutions.

*Sample or census.* Census.

*Population size*. A total of 20,249 units at 714 academic institutions.

*Sample size*. Not applicable.

## Survey Design

*Target population*. The survey target population is all academic institutions in the United States and its territories (Guam and Puerto Rico) that grant research-oriented master's or doctorate degrees in SEH fields. This population includes branch campuses, affiliated research centers and health facilities, and separately organized components, such as medical or dental schools, schools of nursing, and schools of public health.

In 2019, the survey universe included 714 institutions with 809 schools and 20,249 units.[1] There were 512 schools and 18,460 units within 417 doctorate-granting institutions and 297 schools and 1,789 units within 297 master's-granting institutions. Data were collected at the organizational-unit level. Detailed information on the changes to the survey universe and final number of institutions, schools, and units is provided in **table A-1** through **table A-5b**.

*Sample frame.* The total universe in 2019 included 20,249 units at 714 academic institutions in the United States that granted research-based master's degrees or doctorates in SEH fields.

*Sample design.* The GSS is a census in which eligible academic institutions are identified primarily through the Integrated Postsecondary Education Data System (IPEDS).

## Data Collection and Processing Methods

*Data collection.* The survey data are collected through coordinators at eligible institutions. Coordinators are assigned by their institution and are responsible for identifying all GSS-eligible units, collecting the requested data, and submitting the data to the survey contractor. Coordinators query their institutional databases and report data through a file upload. Those unable to provide file uploads can manually enter data into the GSS Web survey. In cases where coordinators are unable to obtain the requested data, coordinators may enlist the aid of others (unit respondents) in their reporting activity. Unit respondents are most commonly used to report detailed financial data. Institutions may assign multiple coordinators. For example, an institution may have one coordinator for each school within the institution or may have separate coordinators for graduate student data and for postdoc and NFR data. When a new coordinator is needed, the president's office at the institution is asked to designate as coordinator the person most knowledgeable about the graduate student or postdoc data.

Once coordinators are confirmed, they are provided access to the GSS Web survey. On request, hard copies of the survey worksheets and GSS-eligible code lists also are mailed to each coordinator as reference. Data are collected at the organizational-unit level (e.g., departments, degree-granting programs, research centers, health facilities) and include demographic and funding information for graduate students and postdocs.

Data submission for the 2019 GSS survey was due on 28 February 2020. A two-week extension was granted to 203 coordinators as of 28 February. As educational institutions closed campuses in response to the coronavirus pandemic it became necessary to push back the extended submission date to 20 April. The data collection team conducted periodic check-ins with coordinators to monitor survey progress.

*Mode.* Electronic data interchange (EDI) is the primary mode of data submission. Coordinators unable to use this method could manually enter their data in the GSS Web survey.

A paper worksheet was provided for informational purposes and to assist in preparing figures to be manually entered in the Web survey. The content and format of the worksheets were identical to the data grids of the Web survey. A very small number of coordinators provided data to the survey contractor using an alternate method—typically, data tables in Microsoft Word, unformatted Excel documents, or PDFs. The survey contractor uploaded these data into the Web survey on behalf of the coordinators.

Response method calculations are better described at the coordinator level rather than at the school or institution level. It has become increasingly common for coordinators at the same school or institution to choose different response method options for each data type (students, postdocs, NFRs). For the 849 coordinators that submitted data in 2019, the modes of response were as follows:

- *EDI.* A total of 687 coordinators (80.9%) uploaded at least part of the requested data
- *Manual data entry.* A total of 159 coordinators (18.7%) reported all GSS data manually through the Web survey
- *Alternate methods.* Three coordinators (0.4%) provided data outside the official GSS Web instrument—typically, various file formats e-mailed directly to the survey contactor

*Response rates.* Response rates are calculated based on responses to the survey's various data-collection grids (graduate student and postdoc counts, by ethnicity and race; full-time graduate student and postdoc counts, by primary source or mechanism of support; counts of postdocs, by type of doctoral degree and primary mechanism of support; counts of postdocs, by type of doctoral degree and citizenship; counts of postdocs, by origin of doctoral degree; and counts of NFRs, by type of doctoral degree and sex).

The method for calculating response rates for units has changed over time. From 2007 to 2016, a complete response required all grids to be completed without error (i.e., the sum of detail counts equaled the grid totals). A unit where some count data were reported—including confirming that there were no counts of a certain data type in that unit—but not all grids were complete was classified as a partial response. Nonresponse was limited to units where no data were reported

for all grids. Beginning in 2017, the response calculation was revised to look only at the grids where data were expected to be reported for a particular unit. For example, if no students were reported or expected for a particular unit, response was calculated based on missingness within the postdoc and NFR grids only. School and institution response rates are based on the overall status of the units within the school or institution. If at least 90% of the units in a school (or institution) provided complete or partial data, the school (or institution) is considered a *complete respondent.* If at least 50%, but less than 90%, of the units provided complete or partial data, the school (or institution) was considered a *partial respondent.* If less than 50% of the units provided data, the school (or institution) was considered a *nonrespondent.*

For information about the methods used before 2007, please see the technical notes section of NCSES publication ***Graduate Students and Postdoctorates in Science and Engineering: Fall 2007***. Response-rate calculations for 2007 and beyond adhere to the American Association for Public Opinion Research standards for computing response rates.[2]

- *Unit response.* In 2019, the GSS received complete responses from 17,035 of the 20,249 eligible units (84.1%). An additional 2,683 units (13.3%) were partial respondents. The remaining 531 units (2.6%) were nonrespondents.
- *School response.* Of the 809 eligible schools, 757 schools (93.6%) were complete respondents, 12 schools (1.5%) were partial respondents, and 40 schools (4.9%) were nonrespondents.
- *Institutional response.* Institutional response rates were calculated using the same criteria for schools. Of the 714 eligible institutions, 670 institutions (93.8%) were complete respondents, 8 institutions (1.1%) were partial respondents, and 36 institutions (5.0%) were nonrespondents.

*Data editing.* Data quality is ensured by interactive edit checks built into the Web survey and by a comprehensive review after the coordinator submits the data. Data collection grids in the Web survey are prefilled with zeros. Respondents are asked to mark a checkbox if the unit does not have eligible data to report. If uploaded data for a unit only contains one type of student (e.g., the unit has master's students but no doctoral students), the appropriate checkbox indicating no students to report is autofilled by the system for the relevant grid. Grids with a marked checkbox contributed to a complete response for the unit. Grids with unchanged, prefilled zeros and an unmarked checkbox disqualified the unit from complete response status.

The Web survey contains edit checks to verify that the data entered are internally consistent and within an expected range, often based on the respondent's previous year data. In 2017, aggregate school-level edit checks were introduced, replacing unit-level checks. Reported aggregate school-level data are compared to the previous year for part-time, full-time, and first-time, full-time students as well as for postdoc and NFR counts. The survey contractor reviews all data submitted by institutions to ensure that data fields are complete and are internally consistent. The data collection team conducts a post-submission data review, whereby coordinators are asked to explain the discrepancy whenever counts differ substantially from those of the previous year. Follow-up with coordinators is also conducted when counts remain identical to the previous year and when there are notable changes to a school's unit list, including unit additions and deletions, changes to the highest-degree-granted status, GSS code, or unit name.[3]

On the basis of follow-up contacts, necessary revisions are made directly in the Web survey by the coordinator, unit respondents, or the survey contractor at the direction of the coordinator. See section "**Survey Quality Measures**" below for a discussion of the types of measurement error detected in the data review and follow-up process.

*Imputation.* The 2019 GSS collected 543 data items related to enrollment and financial support for master's and doctoral full-time and part-time students, postdocs, and NFRs. Of the 543 data items collected in the GSS, the item nonresponse rates ranged from 0.72% to 6.80%. All missing data were imputed.

Different imputation techniques were used for units with and for those without comparable historical data. For units missing a key total (total full-time master's, full-time doctoral, part-time master's, and part-time doctoral students, total postdocs, or total NFRs) with at least 1 year of qualified historical data, a carry-forward imputation method was used. Inflation factors were calculated for the six key totals to account for year-to-year change. The previous year's key totals were carried forward as the imputed values for the current year's key totals and imputed according to the previous year's proportions.

For units that reported totals but no details, details were imputed according to the prior distribution if qualified historical details were available. Otherwise, a nearest-neighbor imputation method was used. In this method, a donor unit that was "nearest" to the unit whose data were being imputed (imputee) was identified among all responding units having similar characteristics as the imputee (e.g., having the same GSS code for program fields and offering a doctoral degree). When graduate student details were imputed, the nearest neighbor selected had full-time and part-time graduate enrollments that were most similar to the imputee's enrollments by degree type. The imputed values were calculated by adjusting the donor's values to account for the difference in full-time and part-time enrollment totals within degree type between the two units.

Similarly, when postdoc or NFR details were imputed, the total number of postdocs or NFRs, respectively, was used to choose the nearest neighbor. If the postdoc or NFR total was missing, the graduate student totals were used to select the nearest neighbor to impute the postdoc or NFR variables. If either the postdoc or NFR key total (or both) was missing, other available key totals were used to select the nearest neighbor to impute the data. The same donor was then used to impute the details corresponding to the imputed key totals.

For institutions or schools that did not respond, all data at the unit level were imputed. These schools are *total institution or school nonrespondents*. For these institutions or schools, if prior unit-level data were available, counts were carried forward, and if no prior data were available then the nearest-neighbor imputation method was used.

Detailed information on the institutions, schools, units, fields, response rates, imputation rates, and a crosswalk between the 2010 Classification of Instructional Programs (CIP) codes and the GSS codes are provided in 17 technical tables for the 2019 GSS. This information is also available in the 2010 GSS Methodology Report available through the GSS project officer.

*Weighting.* Not applicable.

*Variance estimation.* Not applicable.

## Survey Quality Measures

*Sampling error.* Not applicable because the GSS is a census.

*Coverage error.* The availability of comprehensive lists of the master's- and doctorate-granting institutions in the United States and these institutions' high levels of participation in the survey ensures that the coverage error of institutions is minimal. The universe of higher education institutions is reviewed annually to identify potentially eligible institutions. Sources for this review include IPEDS, the Carnegie Classification of Institutions of Higher Education, the Higher Education Directory, the NCSES Higher Education Research and Development Survey, and professional association membership lists.

*Nonresponse error.* The GSS typically has high response rates. In 2019, 98.8% of units provided complete or partial data, and the overall institutional response rate was 98.9%. The final months of the GSS data collection effort occurred as educational institutions were closing campuses in response to the coronavirus pandemic. As a result, the 2019 GSS experienced a drop of 2 percentage points in response rate compared to recent survey cycles. Of the 543 data items collected in the GSS, the item nonresponse rates ranged from 0.72% to 6.80%. All missing data are imputed.

*Measurement error.* The GSS is subject to measurement error that arises when variables of interest cannot be measured accurately or precisely. Review of the data, cognitive interviews, usability tests, pilot tests, site visits, and other methodological activities with the institutions have pointed to several possible sources of measurement error, listed below.

- *Double counting.* Anecdotal evidence indicates some misreporting may occur when an institution has more than one coordinator or offers joint programs. To reduce double counting, facilitate communication, and allow sharing of reported data, a screen in the Web survey provides names and contact information for all coordinators at the institution. Interactive and post-submission checks are also used to confirm that similarly named units within institutions are distinct eligible units.
- *Inclusion of practitioner degrees.* Graduate students working toward practitioner degrees, particularly in health fields with explicit exclusions, may sometimes be overreported. Starting with the 2007 survey cycle, survey materials indicated that students should be excluded from the counts if they are pursuing DDS or MD degrees or master's and certain other degrees in specified fields. During the imputation process—and to be conservative in the absence of other information—new units that were suspected of having reported graduate students in excluded degree-field programs based on the GSS code were set to having zero graduate students. In the 2011 survey cycle, checks were built into the Web survey to remind respondents to exclude students pursuing practitioner-based degrees. The 2017 redesign included a requirement that coordinators confirm via a pop-up dialogue that they excluded practitioner degrees from the data provided in their upload files.
- *Difficulty in reporting source and mechanism of support.* Feedback from respondents and methodological research indicates that financial support data are often difficult for respondents to report. The information may not be stored in one centralized database; financial support may not always be channeled through the institution (e.g., self-support); and foreign sources of support may not always be known. Respondents may also have difficulty categorizing financial information by field, such as when a student is enrolled in one unit but receives support from another. Therefore, these data may be more prone to measurement error than other survey data items. Finally, institutions define mechanisms of support differently (e.g., fellowships vs. traineeships) and may report individuals according to the institution's definition rather than that provided by the GSS. Beginning with the 2010 survey, the grids include "unknown" categories.
- *Difficulty in reporting postdocs and NFRs.* Many respondents indicate in the Web survey that they are unable to provide data on their units' postdocs or NFRs because they do not know all of the units that employ postdocs and NFRs. Starting with the 2010 survey cycle, schools were given the option of appointing a separate postdoc coordinator who may be more knowledgeable about a school's postdocs or NFRs to provide these data.

## Data Comparability

*Changes in survey coverage and population.*

- *Fields of study.*

  2017: The list of GSS-eligible disciplinary fields was updated in 2017 to align with the NCSES Taxonomy of Disciplines. Among the major changes in the update: several fields became ineligible—architecture, communications, and public administration; portions of nutrition and of family and consumer and human sciences also became ineligible. Several fields changed names. A new broad field titled "natural resources and conservation" was split from agricultural sciences. Computer sciences was split into three fields, and the biological and biomedical sciences was reorganized. The taxonomy changes resulted in previously reported units being split across separate GSS codes or moving between codes or broad fields. For more information on the 2017 taxonomy updates, see **table A-1** in the technical notes section of ***Graduate Students and Postdoctorates in Science and Engineering: Fall 2017***.

Due to the taxonomy and data collection changes (described below), a set of bridge estimates was created to permit comparisons to previous years and for trend analyses. These estimates are labeled *2017old* and are available at the broad-field level for all combined graduate student variables as well as postdoc variables. Due to a large increase in counts attributable to prior underreporting, *2017old* estimates are not available for NFR data. The data reported as *2017new* use the updated GSS taxonomy and are comparable to 2018 and 2019 data but are not comparable to data from prior years. Please note that in tables that compare data from 2017 to the present, the *2017new* data are reported as 2017.

2014: The survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in SEH. Eligible units at 151 newly eligible institutions were added, and two private, for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible. Four additional institutions dropped out of the data collection in 2014 because they no longer grant graduate degrees in SEH fields; two merged with previously eligible institutions; and one began reporting data under another institution. As a result, the total number of institutions included in the GSS increased from 564 in 2013 to 706 in 2014. The total net increase in the number of GSS-eligible units was 826, rising to 14,845 in 2014 from 14,019 in 2013. See **table A-1** in the technical notes section of ***Graduate Students and Postdoctorates in Science and Engineering: Fall 2014***.

For more information on the survey frame update, see the special report ***Assessing the Impact of Frame Changes on Trend Data from the Survey of Graduate Students and Postdoctorates in Science and Engineering***.

- *Eligibility and degree-granting status.*

  Institutions are classified as doctorate-granting if at least one GSS-eligible unit confers doctoral degrees. In 2019, 5 institutions became newly eligible for GSS, 3 became ineligible, and 3 institutions merged into one. Seventeen institutions changed GSS degree-granting status: 10 from doctorate-granting to master's-granting institutions, and 7 from master's-granting to doctorate-granting institutions. As a result, the total number of institutions included in the GSS decreased from 715 in 2018 to 714 in 2019 (see **table A-3**).

*Changes in survey content.*

- *Sex.*

  2010: Began collecting ethnicity, race, and citizenship data on postdocs by sex and began collecting type of doctoral degree data on NFRs by sex.

  2008: Began collecting the number of first-time, full-time male graduate students by ethnicity and race; full-time male graduate students by source of support; male postdocs by source of support; and male NFRs. Previously, the number of men was inferred by subtracting the number of women from the total.

- *Ethnicity and race.*

  2010: Began collecting ethnicity and race data for postdocs who are U.S. citizens and permanent residents using the same categories as used for graduate students.

  2008: Revised ethnicity and race categories to correspond to IPEDS by combining "Hispanic/Latino, one race only" and "Hispanic/Latino, more than one race" categories into "Hispanic/Latino (one or more races)."

- *Citizenship.*

  2010: Began collecting citizenship data on postdocs using the same categories that are used for graduate students. In previous years, only counts of postdocs who are foreign nationals holding temporary visas were collected.

2008: Clarification made for “non-U.S. citizens” to exclude non-U.S. citizens residing outside of the United States who are enrolled in an online degree program at a U.S. institution.

- *Financial support.*

  2010: Began collecting data on the largest source of financial support and on the largest mechanism of support separately for postdocs. For mechanism of support, “nonfederal sources” was replaced with “other support.”

  2008: Graduate student data no longer collected for NIH teaching assistantships because NIH does not offer financial support for students through this mechanism.

  2008: Began collecting number of full-time graduate students whose largest source of support came from a non-U.S. source via teaching assistantship.

- *Degree level.*

  2017: Began separate collection of demographic and financial data by master’s and doctoral students.

- *Doctoral degree.*

  2010: Began collecting more detailed information on postdocs’ and NFRs’ doctoral degree type. Categories were added for those holding a doctoral degree (e.g., PhD, ScD, DEng), a professional degree (e.g., MD, DVM, DO, DDS), and dual degrees (e.g., MD-PhD, DVM-PhD) as well as for those for whom type of degree was unknown. In previous years, the GSS collected degree-type information by asking respondents to indicate how many of the total number of postdocs (or NFRs) had MD, DO, DDS, or DVM degrees. This number was used to estimate the number of postdocs (or NFRs) with medical degrees; the number with research degrees was estimated as the difference between the total counts and the counts of those with medical degrees.

  2010: Began collecting postdocs’ doctoral degree type by citizenship and by country of origin (United States, foreign, unknown) of doctoral degrees. Also began collecting NFRs’ doctoral degree type by sex.

*Changes in Web survey instrument.*

2017: Grids for demographics of part-time, of full-time, and of first-time, full-time master’s students were added to the instrument. Grids for source and mechanism of financial support of full-time master’s students were also added.

*Changes in survey procedures.*

2017: Coordinators were asked to report master’s and doctoral student data separately and to use CIP codes to categorize their organizational units when reporting student data. Coordinators could report organizational units with postdocs and NFRs using either CIP or GSS codes. Two alternative methods for uploading the GSS data were expected of coordinators in 2017. The first option enabled coordinators to utilize an Excel template file to construct a de-identified, individual-level data file. This file could then be uploaded directly into the Web survey. The second option enabled the coordinator to aggregate the individual-level data to the unit level using an Excel macro provided in the template file rather than transmit any individual-level data. A manual data entry option was available to those unable to provide an uploaded file. Coordinators had access to data file templates, a sample SQL SELECT statement containing all GSS-eligible CIP codes that could be used to query their information systems, online training videos, and additional support from the survey contractor on the new data collection changes. Coordinators could continue to use unit respondents to provide part or all of the data request. Organizational units that reported using CIP codes were automatically re-coded to the updated GSS taxonomy by the Web instrument. Coordinators reporting data using GSS rather than CIP codes were asked to re-code their organizational units to the updated GSS taxonomy.

2010: Significant effort was made to ensure that appropriate personnel were providing postdoc and NFR data. As a result, it is unclear how much of the increase reported in 2010 represented actual growth in postdocs and how much resulted from improved data collection. For information on the improved data collection and changes in postdoc data, see ***Counts of Postdoctoral Appointees in Science, Engineering, and Health Rise with Reporting Improvements***; for changes in NFR data, see ***Examining the Reporting of Nonfaculty Doctorate Researchers in the Survey of Graduate Students and Postdoctorates in Science and Engineering***.

*Historical changes*. Changes have been made over the years to the coverage and content of the GSS to keep it relevant to the needs of data users. Such changes impact analysis of trend data, so data comparisons across years should be made with caution. This is especially true for counts; however, proportions or shares are typically robust enough to allow for such comparisons.

Due to the survey frame update, the data comparisons between 2014 and earlier years should use the *2014old* data, and those between 2014 and 2016 should use the *2014new* data. The impact of frame updates can be evaluated using the 2014old and 2014new data. For more information on the survey frame update, see the special report ***Assessing the Impact of Frame Changes on Trend Data from the Survey of Graduate Students and Postdoctorates in Science and Engineering***. For more information on the changes prior to 2010, see the technical notes section of ***Graduate Students and Postdoctorates in Science and Engineering: Fall 2009***. For specific changes from the major survey redesign in 2007, see the technical notes section of the **2007 report**.

## Definitions

*Degree level.*

- *Master's degree.* A post-baccalaureate, research-focused degree; includes MA, MS, MASc, and PSM in GSS-eligible disciplines.
- *PhD or PhD equivalent degree.* An advanced, research-focused academic degree—typically, the highest degree granted in a particular field; includes doctorates such as PhD, ScD, DSc, and DEng.

*Enrollment status.*

- *Full-time and part-time.* Coordinators were instructed to use their institution's definitions.
- *First-time, full-time.* Students enrolled for credit in a graduate degree program in an organizational unit for the first time in the fall semester of the survey year. This may include graduate students previously enrolled in another graduate degree program at the institution or at another institution and students who already hold another graduate or professional degree.

*Ethnicity and race*—The GSS uses definitions of ethnicity and race that are based on the OMB's *Standards for the Classification of Federal Data on Race and Ethnicity*.

- *Hispanic/Latino ethnicity (one or more races).*[4] All individuals of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. This category includes individuals who are Hispanic or Latino and any other race(s).
- *Not Hispanic/Latino.* Individuals who are not of Hispanic or Latino descent, regardless of race.
- *American Indian or Alaska Native.* A person of only one race having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment.
- *Asian.* A person of only one race having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent—for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- *Black or African American.* A person of only one race having origins in any of the Black racial groups of Africa.

- *Native Hawaiian or Other Pacific Islander.* A person of only one race having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific islands.
- *White.* A person of only one race having origins in any of the original peoples of Europe, the Middle East, or North Africa.
- *More than one race.* A person of two or more of the race categories listed above.
- *Unknown ethnicity or race.* A person whose ethnicity or race is unknown or not stated.

*Graduate student mechanisms of financial support.*

- *Fellowship.* A competitive award (often from a national competition) given to a graduate student that requires no work of the recipient.
- *Traineeship.* A financial award given to a graduate student selected by the institution.
- *Research assistantship.* A financial award given to a graduate student for which most of the student's responsibilities are devoted primarily to research.
- *Teaching assistantship.* A financial award given to a graduate student for which most of the student's responsibilities are devoted primarily to teaching assistant activities.
- *Other support.* All other mechanisms of support for graduate students.

*Graduate student sources of financial support.*

- *Federal sources.* Financial support provided by the federal agencies. Excludes federally guaranteed student loans.
- *Nonfederal sources.* Financial support from state and local governments; support from the institution, such as tuition waivers and stipends; support from foreign sources, such as foreign governments, foreign firms, and agencies of the United Nations; and other U.S. sources, such as support from nonprofit institutions, private industry, and all other nonfederal U.S. sources.
- *Self-support.* Loans (including federal loans) or personal or family financial contributions.

*Historically Black colleges and universities (HBCUs).* Institutions of higher education that were established prior to 1964 and whose principal mission was, and is, the education of Black Americans. The list of HBCUs is maintained by the White House Initiative on HBCUs (**https://sites.ed.gov/whhbcu/**).

*Nonfaculty researchers (NFRs).* All doctorate-holding researchers who (1) are not considered either postdocs or members of the faculty and (2) are involved principally in SEH research activities. Also referred to as *Other doctorate-holding NFRs*.

*Postdoctoral researchers (postdocs).* The definition of a postdoc varies by institution. Respondents were instructed to use their institution's definition. NCSES defines a postdoc as meeting both of the following qualifications: (1) holds a recent doctoral degree, generally awarded within the past 5–7 years, such as PhD or equivalent (e.g., ScD, DEng), or first-professional degree in a medical or related field (e.g., MD, DDS, DO, DVM), or foreign degree equivalent to a U.S. doctoral degree; and (2) has a limited-term appointment, generally no more than 5–7 years, primarily for training in research or scholarship, and working under the supervision of a senior scholar in a unit affiliated with the institution.

*Postdoc mechanisms of financial support.*

- *Traineeship.* A financial award given to a postdoc selected by the institution.
- *Research grant.* A financial assistance award given to an organization or an individual postdoc that supports specific research goals.
- *Other support.* All other mechanisms of support for postdocs.

*Postdoc sources of financial support.*

- *Federal sources.* Financial support provided by U.S. federal agencies.
- *Nonfederal sources.* Financial support from state and local governments; support from the institution; support from foreign sources, such as foreign governments, foreign firms, and agencies of the United Nations; and other U.S. sources, such as support from nonprofit institutions, private industry, and all other nonfederal U.S. sources.
- *Personal resources.* Personal and family financial resources, including federal and other loans.
- *Unknown or not stated.* Sources of financial support for the postdoc are unknown or cannot be determined.

# Technical Tables



## Science, engineering, and health organizational units



## Imputation, by field and graduate enrollment, postdoctorate, or doctorate-holding nonfaculty researcher status: 2018–19



## Imputation for graduate students, postdoctoral appointees, and doctorate-holding nonfaculty researchers in science, engineering, and health fields: 2019

## GSS and CIP Codes

TABLE A-1

## Changes in the organizational unit listing: 2015–19

(Number)

| Activity | 2015 | 2016[a] | 2017[b] | 2018 | 2019 |
|---|---|---|---|---|---|
| Units at start of data collection | 14,845 | 15,202 | 15,853 | 18,745 | 19,592 |
| Units added | 774 | 1,611 | 16,274 | 5,512 | 4,493 |
| Units deleted | 417 | 960 | 13,382 | 4,665 | 3,836 |
| Units at end of data collection | 15,202 | 15,853 | 18,745 | 19,592 | 20,249 |
| Net difference | 357 | 651 | 2,892 | 847 | 657 |

[a] The 2016 survey included a pilot data collection to assess the feasibility of several data collection changes, including the use of Classification of Instructional Programs (CIP) codes for reporting data and file uploads for transmitting data. The number of units added and deleted by pilot coordinators was much greater than is typical. These increases are largely due to how data are organized in institutional information systems and the increased granularity of CIP codes relative to codes from the Survey of Graduate Students and Postdoctorates in Science and Engineering, rather than a reflection of increased organizational complexity.

[b] In 2017, the data collection changes piloted in 2016 were implemented universally, substantially increasing the number of added and deleted units. In addition, several previously eligible fields became ineligible.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-2

## Changes in the institution status: 2018–19

(Number and detail)

| Institution status |
|---|
| New institutions (5) |
| Albert Einstein C. of Medicine |
| New Jersey City U. |
| St. Francis C. |
| Vanguard U. of Southern California |
| Wesley C. |
| Became ineligible for the survey (3) |
| Connecticut C. |
| International Technological U. |
| Mount Aloysius C. |
| Merged Institutions (3) |
| Philadelphia U. merged with Thomas Jefferson U. |
| U. Maryland Baltimore merged with U. Maryland, College Park |
| Western Michigan U., Homer Stryker School of Medicine merged with Western Michigan U. |
| Changed from a doctorate-granting to master's-granting institution (10)[a] |
| Arcadia U. |
| Bastyr U. |
| CUNY, Queens C. |
| Eastern Kentucky U. |
| Inter American U. Puerto Rico, Metro |
| Jacksonville State U. |
| Loyola U., Maryland |
| SUNY, Oneonta |
| St. Cloud State U. |
| U. Indianapolis |
| Changed from a master's-granting to doctorate-granting institution (7)[a] |
| California State U., Los Angeles |
| California State U., Northridge |
| East Stroudsburg U. Pennsylvania |
| Marymount U. |
| Tarleton State U. |
| Troy U. |
| Widener U. |

[a] Change in degree-granting status refers only to institutions that are eligible for the Survey of Graduate Students and Postdoctorates in Science and Engineering and with master's- or doctorate-granting programs in science, engineering, or health. Some institutions within these classifications may offer doctorate or master’s degrees in other academic fields.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-3

## Surveyed institutions, schools, organizational units, and graduate enrollment, by type of institution: 1972–2019

(Number)

| Year | Institutions | Schools[a] | Organizational units | | | | Graduate enrollment | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | Master's | Doctorate | Non-degree | Total | Full time | Part time |
| All institutions | | | | | | | | | |
| 1972[b] | 252 | 321 | 4,568 | 764 | 3,804 | 0 | 207,859 | 159,392 | 48,467 |
| 1973[b] | 255 | 333 | 6,523 | 851 | 5,557 | 115 | 214,348 | 161,525 | 52,823 |
| 1974[b] | 276 | 367 | 7,468 | 1,387 | 5,951 | 130 | 259,968 | 190,562 | 69,406 |
| 1975 | 584 | 682 | 9,003 | 2,829 | 6,038 | 136 | 328,510 | 219,648 | 108,862 |
| 1976 | 594 | 693 | 9,110 | 2,895 | 6,074 | 141 | 333,716 | 223,412 | 110,304 |
| 1977 | 601 | 704 | 9,392 | 3,081 | 6,168 | 143 | 345,374 | 226,738 | 118,636 |
| 1978 | 599 | 708 | 9,509 | 3,126 | 6,239 | 144 | 339,912 | 223,030 | 116,882 |
| 1979 | 629 | 745 | 9,686 | 3,203 | 5,153 | 1,330 | 357,578 | 231,760 | 125,818 |
| 1980 | 626 | 742 | 9,798 | 3,255 | 5,011 | 1,532 | 367,078 | 238,416 | 128,662 |
| 1981 | 622 | 736 | 9,728 | 3,256 | 4,938 | 1,534 | 375,130 | 242,049 | 133,081 |
| 1982 | 609 | 724 | 9,584 | 3,241 | 4,822 | 1,521 | 382,291 | 244,757 | 137,534 |
| 1983 | 609 | 723 | 9,467 | 3,211 | 4,741 | 1,515 | 390,432 | 252,017 | 138,415 |
| 1984 | 412 | 530 | 8,791 | 2,503 | 4,725 | 1,563 | 394,670 | 253,922 | 140,748 |
| 1985 | 412 | 525 | 8,911 | 2,550 | 4,751 | 1,610 | 404,021 | 257,287 | 146,734 |
| 1986 | 412 | 527 | 8,985 | 2,558 | 4,782 | 1,645 | 415,520 | 266,168 | 149,352 |
| 1987 | 416 | 533 | 9,104 | 2,563 | 4,850 | 1,691 | 421,497 | 271,056 | 150,441 |
| 1988 | 606 | 723 | 10,015 | 3,310 | 4,950 | 1,755 | 424,523 | 275,127 | 149,396 |
| 1989 | 609 | 726 | 10,187 | 3,372 | 5,026 | 1,789 | 434,478 | 282,648 | 151,830 |
| 1990 | 610 | 727 | 10,358 | 3,448 | 5,059 | 1,851 | 452,113 | 292,782 | 159,331 |
| 1991 | 609 | 726 | 10,598 | 3,517 | 5,180 | 1,901 | 471,212 | 307,010 | 164,202 |
| 1992 | 608 | 725 | 10,872 | 3,602 | 5,298 | 1,972 | 493,522 | 322,555 | 170,967 |
| 1993 | 606 | 723 | 11,103 | 3,650 | 5,391 | 2,062 | 504,304 | 329,644 | 174,660 |
| 1994 | 605 | 722 | 11,365 | 3,759 | 5,500 | 2,106 | 504,399 | 332,088 | 172,311 |
| 1995 | 603 | 720 | 11,566 | 3,837 | 5,539 | 2,190 | 499,640 | 329,283 | 170,357 |
| 1996 | 603 | 720 | 11,579 | 3,886 | 5,507 | 2,186 | 494,079 | 328,536 | 165,543 |
| 1997 | 601 | 722 | 11,589 | 3,994 | 5,526 | 2,069 | 487,208 | 327,289 | 159,919 |
| 1998 | 601 | 721 | 11,685 | 4,020 | 5,590 | 2,075 | 485,627 | 327,389 | 158,238 |
| 1999 | 599 | 719 | 11,827 | 4,015 | 5,773 | 2,039 | 493,256 | 334,423 | 158,833 |
| 2000 | 596 | 716 | 11,894 | 4,085 | 5,791 | 2,018 | 493,311 | 341,283 | 152,028 |
| 2001 | 601 | 720 | 11,962 | 4,096 | 5,826 | 2,040 | 509,607 | 354,522 | 155,085 |
| 2002 | 596 | 715 | 12,126 | 4,165 | 5,931 | 2,030 | 540,404 | 378,991 | 161,413 |
| 2003 | 593 | 712 | 12,261 | 4,185 | 6,080 | 1,996 | 567,121 | 397,420 | 169,701 |
| 2004 | 591 | 710 | 12,268 | 4,180 | 6,142 | 1,946 | 574,463 | 402,573 | 171,890 |
| 2005 | 588 | 702 | 12,297 | 4,123 | 6,231 | 1,943 | 582,226 | 406,620 | 175,606 |
| 2006 | 588 | 707 | 12,320 | 4,109 | 6,294 | 1,917 | 597,643 | 419,015 | 178,628 |
| 2007old[c] | 582 | 700 | 12,325 | 4,148 | 6,418 | 1,759 | 607,823 | 430,860 | 176,963 |
| 2007new[c] | 582 | 700 | 12,629 | 4,335 | 6,525 | 1,769 | 619,499 | 437,365 | 182,134 |
| 2008 | 579 | 708 | 13,166 | 4,399 | 6,710 | 2,057 | 631,489 | 449,613 | 181,876 |
| 2009 | 575 | 703 | 13,285 | 4,336 | 6,774 | 2,175 | 631,645 | 456,115 | 175,530 |
| 2010 | 574 | 692 | 13,711 | 4,416 | 6,863 | 2,432 | 632,652 | 461,185 | 171,467 |
| 2011 | 565 | 686 | 13,785 | 4,295 | 6,849 | 2,641 | 626,820 | 457,292 | 169,528 |
| 2012 | 565 | 684 | 13,952 | 4,320 | 6,911 | 2,721 | 627,243 | 459,498 | 167,745 |
| 2013 | 564 | 680 | 14,019 | 4,314 | 6,875 | 2,830 | 633,010 | 468,953 | 164,057 |
| 2014old[d] | 557 | 671 | 14,369 | 4,375 | 6,940 | 3,054 | 650,738 | 484,880 | 165,858 |
| 2014new[d] | 706 | 821 | 14,845 | 4,769 | 6,988 | 3,088 | 666,586 | 492,170 | 174,416 |
| 2015 | 711 | 824 | 15,202 | 4,901 | 7,104 | 3,197 | 685,397 | 506,262 | 179,135 |
| 2016[e] | 714 | 828 | 15,853 | 5,054 | 7,217 | 3,582 | 684,825 | 508,773 | 176,052 |
| 2017 | 703 | 814 | 18,745 | 5,580 | 7,004 | 6,161 | 649,112 | 480,788 | 168,324 |

TABLE A-3

## Surveyed institutions, schools, organizational units, and graduate enrollment, by type of institution: 1972–2019

(Number)

| Year | Institutions | Schools[a] | Organizational units | | | | Graduate enrollment | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | Master's | Doctorate | Non-degree | Total | Full time | Part time |
| 2018 | 715 | 817 | 19,592 | 5,857 | 7,180 | 6,555 | 668,307 | 491,449 | 176,858 |
| 2019 | 714 | 809 | 20,249 | 5,985 | 7,203 | 7,061 | 690,117 | 502,442 | 187,675 |
| Doctorate institutions | | | | | | | | | |
| 1972 | 252 | 321 | 4,568 | 764 | 3,804 | 0 | 207,859 | 159,392 | 48,467 |
| 1973 | 255 | 333 | 6,523 | 851 | 5,557 | 115 | 214,348 | 161,525 | 52,823 |
| 1974 | 276 | 367 | 7,468 | 1,387 | 5,951 | 130 | 259,968 | 190,562 | 69,406 |
| 1975 | 345 | 443 | 8,031 | 1,857 | 6,038 | 136 | 301,902 | 209,328 | 92,574 |
| 1976 | 355 | 454 | 8,131 | 1,916 | 6,074 | 141 | 305,824 | 213,033 | 92,791 |
| 1977 | 357 | 460 | 8,361 | 2,050 | 6,168 | 143 | 313,938 | 215,377 | 98,561 |
| 1978 | 345 | 454 | 8,381 | 1,998 | 6,239 | 144 | 308,107 | 211,508 | 96,599 |
| 1979 | 371 | 487 | 8,612 | 2,130 | 5,153 | 1,329 | 323,677 | 219,634 | 104,043 |
| 1980 | 370 | 486 | 8,714 | 2,174 | 5,011 | 1,529 | 333,164 | 225,877 | 107,287 |
| 1981 | 370 | 484 | 8,645 | 2,174 | 4,938 | 1,533 | 339,946 | 229,708 | 110,238 |
| 1982 | 369 | 484 | 8,504 | 2,162 | 4,822 | 1,520 | 346,668 | 232,980 | 113,688 |
| 1983 | 371 | 485 | 8,386 | 2,133 | 4,741 | 1,512 | 354,060 | 239,220 | 114,840 |
| 1984 | 346 | 464 | 8,320 | 2,033 | 4,725 | 1,562 | 353,673 | 239,400 | 114,273 |
| 1985 | 346 | 459 | 8,434 | 2,074 | 4,751 | 1,609 | 362,581 | 242,748 | 119,833 |
| 1986 | 346 | 461 | 8,509 | 2,083 | 4,782 | 1,644 | 373,545 | 251,562 | 121,983 |
| 1987 | 350 | 467 | 8,626 | 2,087 | 4,850 | 1,689 | 378,785 | 255,936 | 122,849 |
| 1988 | 377 | 494 | 8,949 | 2,250 | 4,950 | 1,749 | 386,300 | 262,351 | 123,949 |
| 1989 | 380 | 497 | 9,084 | 2,276 | 5,026 | 1,782 | 394,510 | 269,679 | 124,831 |
| 1990 | 379 | 496 | 9,234 | 2,332 | 5,059 | 1,843 | 409,419 | 278,637 | 130,782 |
| 1991 | 379 | 496 | 9,435 | 2,362 | 5,180 | 1,893 | 425,914 | 291,508 | 134,406 |
| 1992 | 379 | 496 | 9,678 | 2,417 | 5,298 | 1,963 | 445,704 | 305,979 | 139,725 |
| 1993 | 379 | 496 | 9,875 | 2,434 | 5,391 | 2,050 | 454,745 | 312,519 | 142,226 |
| 1994 | 378 | 495 | 10,093 | 2,499 | 5,500 | 2,094 | 455,332 | 313,976 | 141,356 |
| 1995 | 377 | 494 | 10,269 | 2,552 | 5,539 | 2,178 | 449,555 | 310,538 | 139,017 |
| 1996 | 378 | 495 | 10,289 | 2,608 | 5,507 | 2,174 | 444,319 | 309,418 | 134,901 |
| 1997 | 377 | 498 | 10,271 | 2,688 | 5,526 | 2,057 | 438,135 | 307,697 | 130,438 |
| 1998 | 377 | 497 | 10,366 | 2,713 | 5,590 | 2,063 | 435,826 | 307,040 | 128,786 |
| 1999 | 378 | 498 | 10,482 | 2,683 | 5,773 | 2,026 | 443,104 | 313,866 | 129,238 |
| 2000 | 377 | 497 | 10,526 | 2,726 | 5,791 | 2,009 | 443,542 | 319,923 | 123,619 |
| 2001 | 381 | 500 | 10,577 | 2,728 | 5,826 | 2,023 | 459,438 | 332,732 | 126,706 |
| 2002 | 376 | 495 | 10,726 | 2,778 | 5,931 | 2,017 | 487,645 | 355,611 | 132,034 |
| 2003 | 376 | 495 | 10,849 | 2,790 | 6,080 | 1,979 | 510,335 | 372,366 | 137,969 |
| 2004 | 376 | 495 | 10,858 | 2,781 | 6,142 | 1,935 | 518,641 | 377,984 | 140,657 |
| 2005 | 375 | 489 | 10,907 | 2,745 | 6,231 | 1,931 | 527,048 | 381,198 | 145,850 |
| 2006 | 376 | 495 | 10,946 | 2,745 | 6,294 | 1,907 | 542,073 | 393,138 | 148,935 |
| 2007old[c] | 375 | 493 | 10,976 | 2,830 | 6,418 | 1,728 | 551,832 | 403,722 | 148,110 |
| 2007new[c] | 375 | 493 | 11,210 | 2,949 | 6,525 | 1,736 | 561,352 | 409,421 | 151,931 |
| 2008 | 376 | 505 | 11,773 | 3,042 | 6,710 | 2,021 | 574,241 | 422,287 | 151,954 |
| 2009 | 366 | 493 | 11,865 | 2,956 | 6,774 | 2,135 | 573,883 | 428,856 | 145,027 |
| 2010 | 364 | 481 | 12,276 | 3,023 | 6,863 | 2,390 | 575,785 | 433,252 | 142,533 |
| 2011 | 368 | 488 | 12,419 | 2,964 | 6,849 | 2,606 | 570,534 | 430,623 | 139,911 |
| 2012 | 367 | 485 | 12,567 | 2,977 | 6,911 | 2,679 | 571,578 | 433,177 | 138,401 |
| 2013 | 364 | 480 | 12,607 | 2,940 | 6,875 | 2,792 | 574,004 | 439,950 | 134,054 |
| 2014old[d] | 366 | 480 | 12,985 | 3,028 | 6,940 | 3,017 | 588,600 | 451,884 | 136,716 |
| 2014new[d] | 406 | 521 | 13,140 | 3,115 | 6,988 | 3,037 | 588,952 | 452,801 | 136,151 |
| 2015 | 412 | 525 | 13,506 | 3,251 | 7,104 | 3,151 | 604,944 | 464,695 | 140,249 |

TABLE A-3

## Surveyed institutions, schools, organizational units, and graduate enrollment, by type of institution: 1972–2019

(Number)

| Year | Institutions | Schools[a] | Organizational units | | | | Graduate enrollment | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | Master's | Doctorate | Non-degree | Total | Full time | Part time |
| 2016[e] | 415 | 529 | 14,188 | 3,451 | 7,217 | 3,520 | 609,420 | 468,678 | 140,742 |
| 2017 | 399 | 509 | 16,971 | 3,934 | 7,004 | 6,033 | 577,139 | 442,001 | 135,138 |
| 2018 | 421 | 522 | 17,782 | 4,186 | 7,180 | 6,416 | 602,332 | 457,543 | 144,789 |
| 2019 | 417 | 512 | 18,460 | 4,322 | 7,203 | 6,935 | 627,136 | 469,732 | 157,404 |
| Master's institutions | | | | | | | | | |
| 1975[f] | 239 | 239 | 972 | 972 | na | 0 | 26,608 | 10,320 | 16,288 |
| 1976 | 239 | 239 | 979 | 979 | na | 0 | 27,892 | 10,379 | 17,513 |
| 1977 | 244 | 244 | 1,031 | 1,031 | na | 0 | 31,436 | 11,361 | 20,075 |
| 1978[g] | 254 | 254 | 1,128 | 1,128 | na | 0 | 31,805 | 11,522 | 20,283 |
| 1979 | 258 | 258 | 1,074 | 1,073 | na | 1 | 33,901 | 12,126 | 21,775 |
| 1980 | 256 | 256 | 1,084 | 1,081 | na | 3 | 33,914 | 12,539 | 21,375 |
| 1981 | 252 | 252 | 1,083 | 1,082 | na | 1 | 35,184 | 12,341 | 22,843 |
| 1982 | 240 | 240 | 1,080 | 1,079 | na | 1 | 35,623 | 11,777 | 23,846 |
| 1983 | 238 | 238 | 1,081 | 1,078 | na | 3 | 36,372 | 12,797 | 23,575 |
| 1984 | 66 | 66 | 471 | 470 | na | 1 | 40,997 | 14,522 | 26,475 |
| 1985 | 66 | 66 | 477 | 476 | na | 1 | 41,440 | 14,539 | 26,901 |
| 1986 | 66 | 66 | 476 | 475 | na | 1 | 41,975 | 14,606 | 27,369 |
| 1987 | 66 | 66 | 478 | 476 | na | 2 | 42,712 | 15,120 | 27,592 |
| 1988 | 229 | 229 | 1,066 | 1,060 | na | 6 | 38,223 | 12,776 | 25,447 |
| 1989 | 229 | 229 | 1,103 | 1,096 | na | 7 | 39,968 | 12,969 | 26,999 |
| 1990 | 231 | 231 | 1,124 | 1,116 | na | 8 | 42,694 | 14,145 | 28,549 |
| 1991 | 230 | 230 | 1,163 | 1,155 | na | 8 | 45,298 | 15,502 | 29,796 |
| 1992 | 229 | 229 | 1,194 | 1,185 | na | 9 | 47,818 | 16,576 | 31,242 |
| 1993 | 227 | 227 | 1,228 | 1,216 | na | 12 | 49,559 | 17,125 | 32,434 |
| 1994 | 227 | 227 | 1,272 | 1,260 | na | 12 | 49,067 | 18,112 | 30,955 |
| 1995 | 226 | 226 | 1,297 | 1,285 | na | 12 | 50,085 | 18,745 | 31,340 |
| 1996 | 225 | 225 | 1,290 | 1,278 | na | 12 | 49,760 | 19,118 | 30,642 |
| 1997 | 224 | 224 | 1,318 | 1,306 | na | 12 | 49,073 | 19,592 | 29,481 |
| 1998 | 224 | 224 | 1,319 | 1,307 | na | 12 | 49,801 | 20,349 | 29,452 |
| 1999 | 221 | 221 | 1,345 | 1,332 | na | 13 | 50,152 | 20,557 | 29,595 |
| 2000 | 219 | 219 | 1,368 | 1,359 | na | 9 | 49,769 | 21,360 | 28,409 |
| 2001 | 220 | 220 | 1,385 | 1,368 | na | 17 | 50,169 | 21,790 | 28,379 |
| 2002 | 220 | 220 | 1,400 | 1,387 | na | 13 | 52,759 | 23,380 | 29,379 |
| 2003 | 217 | 217 | 1,412 | 1,395 | na | 17 | 56,786 | 25,054 | 31,732 |
| 2004 | 215 | 215 | 1,410 | 1,399 | na | 11 | 55,822 | 24,589 | 31,233 |
| 2005 | 213 | 213 | 1,390 | 1,378 | na | 12 | 55,178 | 25,422 | 29,756 |
| 2006 | 212 | 212 | 1,374 | 1,364 | na | 10 | 55,570 | 25,877 | 29,693 |
| 2007old[c] | 207 | 207 | 1,349 | 1,318 | na | 31 | 55,991 | 27,138 | 28,853 |
| 2007new[c] | 207 | 207 | 1,419 | 1,386 | na | 33 | 58,147 | 27,944 | 30,203 |
| 2008 | 203 | 203 | 1,393 | 1,357 | na | 36 | 57,248 | 27,326 | 29,922 |
| 2009 | 209 | 210 | 1,420 | 1,380 | na | 40 | 57,762 | 27,259 | 30,503 |
| 2010 | 210 | 211 | 1,435 | 1,393 | na | 42 | 56,867 | 27,933 | 28,934 |
| 2011 | 197 | 198 | 1,366 | 1,331 | na | 35 | 56,286 | 26,669 | 29,617 |
| 2012 | 198 | 199 | 1,385 | 1,343 | na | 42 | 55,665 | 26,321 | 29,344 |
| 2013 | 200 | 200 | 1,412 | 1,374 | na | 38 | 59,006 | 29,003 | 30,003 |
| 2014old[d] | 191 | 191 | 1,384 | 1,347 | na | 37 | 62,138 | 32,996 | 29,142 |
| 2014new[d] | 300 | 300 | 1,705 | 1,654 | na | 51 | 77,634 | 39,369 | 38,265 |
| 2015 | 299 | 299 | 1,696 | 1,650 | na | 46 | 80,453 | 41,567 | 38,886 |
| 2016[e] | 299 | 299 | 1,665 | 1,603 | na | 62 | 75,405 | 40,095 | 35,310 |

TABLE A-3

## Surveyed institutions, schools, organizational units, and graduate enrollment, by type of institution: 1972–2019

(Number)

| Year | Institutions | Schools[a] | Organizational units | | | | Graduate enrollment | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | Master's | Doctorate | Non-degree | Total | Full time | Part time |
| 2017 | 304 | 305 | 1,774 | 1,646 | na | 128 | 71,973 | 38,787 | 33,186 |
| 2018 | 294 | 295 | 1,810 | 1,671 | na | 139 | 65,975 | 33,906 | 32,069 |
| 2019 | 297 | 297 | 1,789 | 1,663 | na | 126 | 62,981 | 32,710 | 30,271 |

na = not applicable.

[a] Schools are administrative and degree-granting entities within academic institutions. Schools surveyed may exceed institutions surveyed because schools at some institutions report information to the survey separately. Examples of schools eligible for the Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) include graduate schools, schools of architecture, schools of medicine, schools of nursing, schools of pharmacology, schools of public health, and schools of veterinary medicine.

[b] Data collected only from the doctorate-granting institutions.

[c] In 2007, GSS-eligible fields were reclassified, newly eligible fields were added, and survey was redesigned to improve coverage and coding of GSS-eligible units. 2007new" presents data as collected in 2007; "2007old" reflects data as they would have been collected under 2006 methodology. See appendix A

[d] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible.

[e] The 2016 survey included a pilot data collection to assess the feasibility of several data collection changes, including the use of Classification of Instructional Programs (CIP) codes for reporting data and file uploads for transmitting data. The number of units added and deleted by pilot coordinators was much greater than is typical. These increases are largely due to how data are organized in institutional information systems and the increased granularity of CIP codes relative to GSS codes, rather than a reflection of increased organizational complexity.

[f] 1976 survey also collected 1975 data from master's-granting institutions.

[g] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

**Note(s):**

Data from 1972 to 1974 are not directly comparable with data from 1975 forward due to changes both in science and engineering fields and in types of institutions covered in the survey. In 2007, newly eligible science fields were added.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-4

## Science, engineering, and health organizational units with graduate student enrollment, by detailed field: 2017–19

(Number)

| Field | 2017[a] | | | 2018 | | | 2019 | | |
|---|---|---|---|---|---|---|---|---|---|
| | All units with students | Units with master's students | Units with doctoral students | All units with students | Units with master's students | Units with doctoral students | All units with students | Units with master's students | Units with doctoral students |
| All surveyed fields[b] | 12,479 | 9,625 | 6,915 | 13,000 | 10,093 | 7,083 | 13,149 | 10,281 | 7,135 |
| Science and engineering | 11,142 | 8,614 | 6,309 | 11,584 | 9,000 | 6,451 | 11,723 | 9,170 | 6,502 |
| Science | 8,952 | 6,649 | 4,970 | 9,338 | 6,984 | 5,113 | 9,451 | 7,119 | 5,148 |
| Agricultural sciences | 267 | 247 | 176 | 290 | 267 | 183 | 291 | 268 | 185 |
| Biological and biomedical sciences[c] | 2,586 | 1,503 | 1,816 | 2,614 | 1,545 | 1,839 | 2,638 | 1,581 | 1,848 |
| Biochemistry | 194 | 90 | 159 | 188 | 84 | 159 | 190 | 93 | 158 |
| Biology | 392 | 344 | 162 | 394 | 349 | 161 | 386 | 338 | 166 |
| Biomedical sciences | 153 | 93 | 96 | 159 | 105 | 95 | 175 | 112 | 106 |
| Biophysics | 41 | 5 | 40 | 39 | 3 | 39 | 44 | 6 | 44 |
| Biostatistics and bioinformatics | 162 | 121 | 104 | 176 | 126 | 118 | 185 | 135 | 119 |
| Biotechnology | 64 | 59 | 6 | 67 | 61 | 8 | 76 | 71 | 8 |
| Botany and plant biology | 69 | 53 | 61 | 68 | 55 | 60 | 67 | 55 | 57 |
| Cell, cellular biology, and anatomical sciences | 176 | 74 | 144 | 190 | 74 | 161 | 187 | 79 | 154 |
| Ecology and population biology | 100 | 60 | 75 | 109 | 71 | 79 | 107 | 67 | 79 |
| Epidemiology | 66 | 47 | 54 | 70 | 50 | 57 | 85 | 58 | 65 |
| Genetics | 101 | 47 | 78 | 102 | 51 | 77 | 98 | 48 | 73 |
| Microbiological sciences and immunology | 188 | 84 | 151 | 177 | 79 | 148 | 174 | 79 | 146 |
| Molecular biology | 52 | 19 | 38 | 53 | 21 | 38 | 53 | 20 | 40 |
| Neurobiology and neuroscience | 168 | 39 | 154 | 169 | 35 | 156 | 178 | 44 | 160 |
| Nutrition science | 88 | 82 | 46 | 103 | 94 | 54 | 101 | 92 | 53 |
| Pathology and experimental pathology | 50 | 13 | 45 | 48 | 15 | 44 | 44 | 14 | 39 |
| Pharmacology and toxicology | 138 | 62 | 119 | 133 | 60 | 117 | 130 | 63 | 114 |
| Physiology | 188 | 98 | 138 | 176 | 90 | 131 | 179 | 97 | 132 |
| Zoology and animal biology | 82 | 65 | 69 | 77 | 63 | 66 | 75 | 62 | 65 |
| Biological and biomedical sciences nec | 114 | 48 | 77 | 116 | 59 | 71 | 104 | 48 | 70 |
| Computer and information sciences | 777 | 719 | 229 | 858 | 785 | 267 | 905 | 833 | 266 |
| Computer science | 243 | 226 | 102 | 261 | 243 | 112 | 264 | 248 | 111 |
| Computer and information sciences, general | 303 | 274 | 91 | 331 | 292 | 110 | 350 | 311 | 108 |
| Computer and information sciences nec | 231 | 219 | 36 | 266 | 250 | 45 | 291 | 274 | 47 |

TABLE A-4

## Science, engineering, and health organizational units with graduate student enrollment, by detailed field: 2017–19

(Number)

| Field | 2017[a] | | | 2018 | | | 2019 | | |
|---|---|---|---|---|---|---|---|---|---|
| | All units with students | Units with master's students | Units with doctoral students | All units with students | Units with master's students | Units with doctoral students | All units with students | Units with master's students | Units with doctoral students |
| Geosciences, atmospheric sciences, and ocean sciences | 392 | 333 | 257 | 401 | 344 | 265 | 390 | 335 | 265 |
| Atmospheric sciences and meteorology | 53 | 42 | 42 | 53 | 43 | 43 | 49 | 39 | 43 |
| Geological and earth sciences | 251 | 216 | 159 | 271 | 233 | 170 | 264 | 228 | 169 |
| Ocean and marine sciences | 80 | 67 | 52 | 77 | 68 | 52 | 77 | 68 | 53 |
| Geosciences, atmospheric sciences, and ocean sciences nec | 8 | 8 | 4 | ne | ne | ne | ne | ne | ne |
| Mathematics and statistics | 607 | 526 | 309 | 641 | 554 | 323 | 659 | 571 | 326 |
| Mathematics and applied mathematics | 443 | 381 | 223 | 467 | 398 | 234 | 476 | 406 | 237 |
| Statistics | 164 | 145 | 86 | 174 | 156 | 89 | 183 | 165 | 89 |
| Multidisciplinary and interdisciplinary studies | 276 | 206 | 111 | 299 | 233 | 112 | 300 | 232 | 113 |
| Natural resources and conservation | 318 | 275 | 144 | 356 | 312 | 146 | 356 | 312 | 148 |
| Environmental science and studies | 169 | 139 | 65 | 202 | 173 | 64 | 199 | 171 | 66 |
| Forestry, natural resources, and conservation | 149 | 136 | 79 | 154 | 139 | 82 | 157 | 141 | 82 |
| Physical sciences | 758 | 558 | 535 | 782 | 560 | 549 | 786 | 575 | 554 |
| Astronomy and astrophysics | 55 | 15 | 49 | 60 | 15 | 54 | 63 | 17 | 57 |
| Chemistry | 355 | 289 | 230 | 360 | 290 | 231 | 357 | 284 | 229 |
| Materials sciences | 44 | 30 | 37 | 47 | 30 | 38 | 51 | 36 | 40 |
| Physics | 278 | 206 | 206 | 287 | 205 | 213 | 288 | 219 | 216 |
| Physical sciences nec | 26 | 18 | 13 | 28 | 20 | 13 | 27 | 19 | 12 |
| Psychology | 986 | 694 | 459 | 1,022 | 716 | 466 | 1,029 | 735 | 465 |
| Clinical psychology | 125 | 64 | 73 | 129 | 68 | 71 | 128 | 63 | 76 |
| Counseling and applied psychology | 470 | 363 | 197 | 482 | 375 | 192 | 491 | 397 | 179 |
| Psychology, general | 286 | 215 | 120 | 299 | 222 | 127 | 287 | 215 | 125 |
| Research and experimental psychology | 105 | 52 | 69 | 112 | 51 | 76 | 123 | 60 | 85 |
| Social sciences | 1,985 | 1,588 | 934 | 2,075 | 1,668 | 963 | 2,097 | 1,677 | 978 |
| Agricultural economics | 46 | 41 | 29 | 50 | 42 | 28 | 46 | 38 | 25 |
| Anthropology | 176 | 129 | 106 | 175 | 132 | 105 | 175 | 127 | 106 |
| Criminal justice and safety studies | 95 | 92 | 18 | 103 | 100 | 21 | 110 | 107 | 22 |

TABLE A-4

## Science, engineering, and health organizational units with graduate student enrollment, by detailed field: 2017–19

(Number)

| Field | 2017[a] | | | 2018 | | | 2019 | | |
|---|---|---|---|---|---|---|---|---|---|
| | All units with students | Units with master's students | Units with doctoral students | All units with students | Units with master's students | Units with doctoral students | All units with students | Units with master's students | Units with doctoral students |
| Economics (except agricultural) | 251 | 197 | 135 | 263 | 202 | 149 | 267 | 209 | 152 |
| Geography and cartography | 159 | 148 | 70 | 166 | 159 | 68 | 166 | 159 | 67 |
| History and philosophy of science | 14 | 8 | 13 | 15 | 9 | 14 | 15 | 8 | 14 |
| Human development | 58 | 50 | 24 | 65 | 55 | 27 | 67 | 59 | 26 |
| International relations and national security studies | 88 | 84 | 15 | 97 | 91 | 17 | 94 | 88 | 16 |
| Linguistics | 104 | 75 | 63 | 102 | 78 | 56 | 101 | 73 | 59 |
| Political science and government | 221 | 170 | 128 | 221 | 168 | 128 | 222 | 166 | 131 |
| Public policy analysis | 124 | 89 | 54 | 133 | 102 | 56 | 143 | 110 | 58 |
| Sociology | 235 | 169 | 127 | 234 | 165 | 129 | 235 | 162 | 130 |
| Social sciences nec | 414 | 336 | 152 | 451 | 365 | 165 | 456 | 371 | 172 |
| Engineering | 2,190 | 1,965 | 1,339 | 2,246 | 2,016 | 1,338 | 2,272 | 2,051 | 1,354 |
| Aerospace, aeronautical, and astronautical engineering | 62 | 60 | 48 | 63 | 62 | 48 | 64 | 62 | 49 |
| Agricultural engineering | 36 | 32 | 28 | 30 | 29 | 25 | 33 | 31 | 26 |
| Bioengineering and biomedical engineering | 180 | 157 | 129 | 192 | 166 | 138 | 193 | 168 | 140 |
| Biological and biosystems engineering | 11 | 7 | 10 | 14 | 8 | 13 | 15 | 10 | 14 |
| Chemical engineering | 161 | 146 | 130 | 164 | 145 | 128 | 159 | 145 | 128 |
| Civil engineering | 315 | 288 | 187 | 326 | 302 | 187 | 330 | 308 | 185 |
| Electrical, electronics, and communications engineering | 415 | 391 | 233 | 417 | 392 | 221 | 421 | 395 | 225 |
| Engineering mechanics, physics, and science | 59 | 45 | 42 | 59 | 44 | 42 | 65 | 47 | 43 |
| Industrial and manufacturing engineering | 210 | 189 | 105 | 213 | 194 | 101 | 223 | 204 | 102 |
| Mechanical engineering | 260 | 243 | 168 | 261 | 250 | 166 | 263 | 253 | 164 |
| Metallurgical and materials engineering | 112 | 91 | 89 | 120 | 99 | 90 | 119 | 106 | 90 |
| Mining engineering | 31 | 26 | 17 | 28 | 26 | 15 | 25 | 24 | 15 |
| Nanotechnology | 8 | 5 | 3 | 6 | 4 | 2 | 7 | 4 | 3 |
| Nuclear engineering | 33 | 29 | 27 | 34 | 31 | 29 | 31 | 30 | 29 |
| Petroleum engineering | 23 | 21 | 15 | 25 | 23 | 15 | 26 | 24 | 15 |

TABLE A-4

## Science, engineering, and health organizational units with graduate student enrollment, by detailed field: 2017–19

(Number)

| Field | 2017[a] | | | 2018 | | | 2019 | | |
|---|---|---|---|---|---|---|---|---|---|
| | All units with students | Units with master's students | Units with doctoral students | All units with students | Units with master's students | Units with doctoral students | All units with students | Units with master's students | Units with doctoral students |
| Engineering nec | 274 | 235 | 108 | 294 | 241 | 118 | 298 | 240 | 126 |
| Health | 1,337 | 1,011 | 606 | 1,416 | 1,093 | 632 | 1,426 | 1,111 | 633 |
| Clinical medicine[d] | 448 | 387 | 177 | 489 | 429 | 184 | 499 | 442 | 185 |
| Public health | 403 | 348 | 161 | 439 | 386 | 165 | 446 | 399 | 165 |
| Clinical medicine nec | 45 | 39 | 16 | 50 | 43 | 19 | 53 | 43 | 20 |
| Other health | 889 | 624 | 429 | 927 | 664 | 448 | 927 | 669 | 448 |
| Communication disorders sciences | 234 | 206 | 74 | 237 | 215 | 73 | 244 | 223 | 70 |
| Dental sciences | 94 | 84 | 22 | 101 | 90 | 24 | 87 | 78 | 20 |
| Nursing science | 129 | 22 | 116 | 119 | 17 | 111 | 125 | 18 | 117 |
| Pharmaceutical sciences | 103 | 64 | 79 | 117 | 72 | 91 | 119 | 77 | 92 |
| Veterinary biomedical and clinical sciences | 37 | 30 | 22 | 36 | 28 | 23 | 38 | 28 | 25 |
| Other health nec | 292 | 218 | 116 | 317 | 242 | 126 | 314 | 245 | 124 |

ne = not eligible.

nec = not elsewhere classified.

[a] The number of units is not strictly comparable between 2017 and prior years as the change in data collection led to existing units to be split by Classification of Instructional Programs (CIP) code. Additionally, many schools reorganized units voluntarily, leading to a large increase in overall units.

[b] Several field names changed in 2017; the field names listed in this table are the field names used in the Survey of Graduate Students and Postdoctorates in Science and Engineering collection and reporting for 2017. For a complete list of field names used prior to 2017, see **https://ncsesdata.nsf.gov/gradpostdoc/2016/html/GSS2016_TTA_17.html**.

[c] In 2017, the biological and biomedical sciences fields were reorganized. Part of nutritional sciences became ineligible in 2017; aside from this, all other deleted fields in the biological and biomedical sciences remained eligible under a different field name. For fields such as zoology and animal biology, which existed in 2017 and earlier, the composition of subfields in this field changed.

[d] Clinical medicine includes graduate students in public health and clinical medicine not elsewhere classified.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-5a

## Science, engineering, and health organizational units with nonfaculty researchers, by detailed field: 2017–19

(Number)

| Field | 2017 | 2018 | 2019 |
|---|---|---|---|
| All surveyed fields | 4,856 | 4,987 | 5,460 |
| Science and engineering | 3,460 | 3,642 | 3,931 |
| Science | 2,754 | 2,891 | 3,109 |
| Agricultural sciences | 134 | 146 | 169 |
| Biological and biomedical sciences | 1,136 | 1,163 | 1,195 |
| Biochemistry | 105 | 101 | 103 |
| Biology | 111 | 129 | 126 |
| Biomedical sciences | 27 | 27 | 37 |
| Biophysics | 5 | 5 | 7 |
| Biostatistics and bioinformatics | 56 | 63 | 57 |
| Biotechnology | 14 | 12 | 12 |
| Botany and plant biology | 36 | 35 | 31 |
| Cell, cellular biology, and anatomical sciences | 78 | 87 | 88 |
| Ecology and population biology | 40 | 45 | 35 |
| Epidemiology | 24 | 20 | 20 |
| Genetics | 67 | 63 | 74 |
| Microbiological sciences and immunology | 119 | 108 | 115 |
| Molecular biology | 23 | 29 | 29 |
| Neurobiology and neuroscience | 100 | 92 | 96 |
| Nutrition science | 22 | 37 | 24 |
| Pathology and experimental pathology | 47 | 47 | 51 |
| Pharmacology and toxicology | 78 | 71 | 75 |
| Physiology | 95 | 94 | 107 |
| Zoology and animal biology | 34 | 33 | 35 |
| Biological and biomedical sciences nec | 55 | 65 | 73 |
| Computer and information sciences | 111 | 126 | 149 |
| Computer science | 52 | 52 | 56 |
| Computer and information sciences, general | 44 | 45 | 55 |
| Computer and information sciences nec | 15 | 29 | 38 |
| Geosciences, atmospheric sciences, and ocean sciences | 198 | 206 | 226 |
| Atmospheric sciences and meteorology | 39 | 41 | 41 |
| Geological and earth sciences | 88 | 104 | 126 |
| Ocean and marine sciences | 49 | 44 | 42 |
| Geosciences, atmospheric sciences, and ocean sciences nec | 22 | 17 | 17 |
| Mathematics and statistics | 67 | 69 | 76 |
| Mathematics and applied mathematics | 50 | 49 | 53 |
| Statistics | 17 | 20 | 23 |
| Multidisciplinary and interdisciplinary studies | 161 | 155 | 177 |
| Natural resources and conservation | 87 | 118 | 133 |
| Environmental science and studies | 31 | 47 | 48 |
| Forestry, natural resources, and conservation | 56 | 71 | 85 |
| Physical sciences | 374 | 377 | 391 |
| Astronomy and astrophysics | 46 | 45 | 50 |
| Chemistry | 140 | 144 | 154 |
| Materials sciences | 21 | 23 | 21 |
| Physics | 154 | 150 | 145 |
| Physical sciences nec | 13 | 15 | 21 |
| Psychology | 106 | 114 | 129 |
| Clinical psychology | 9 | 5 | 5 |
| Counseling and applied psychology | 24 | 23 | 32 |
| Psychology, general | 50 | 64 | 73 |

TABLE A-5a

## Science, engineering, and health organizational units with nonfaculty researchers, by detailed field: 2017–19

(Number)

| Field | 2017 | 2018 | 2019 |
|---|---|---|---|
| Research and experimental psychology | 23 | 22 | 19 |
| Social sciences | 380 | 417 | 464 |
| Agricultural economics | 17 | 18 | 19 |
| Anthropology | 29 | 33 | 35 |
| Criminal justice and safety studies | 4 | 6 | 7 |
| Economics (except agricultural) | 42 | 41 | 43 |
| Geography and cartography | 29 | 30 | 35 |
| History and philosophy of science | 3 | 1 | 2 |
| Human development | 32 | 26 | 32 |
| International relations and national security studies | 7 | 9 | 11 |
| Linguistics | 16 | 15 | 14 |
| Political science and government | 21 | 23 | 28 |
| Public policy analysis | 48 | 62 | 63 |
| Sociology | 41 | 42 | 46 |
| Social sciences nec | 91 | 111 | 129 |
| Engineering | 706 | 751 | 822 |
| Aerospace, aeronautical, and astronautical engineering | 22 | 26 | 24 |
| Agricultural engineering | 16 | 17 | 16 |
| Bioengineering and biomedical engineering | 82 | 76 | 91 |
| Biological and biosystems engineering | 6 | 9 | 11 |
| Chemical engineering | 68 | 71 | 79 |
| Civil engineering | 99 | 107 | 120 |
| Electrical, electronics, and communications engineering | 117 | 120 | 128 |
| Engineering mechanics, physics, and science | 18 | 18 | 18 |
| Industrial and manufacturing engineering | 40 | 39 | 40 |
| Mechanical engineering | 99 | 98 | 105 |
| Metallurgical and materials engineering | 39 | 53 | 59 |
| Mining engineering | 11 | 12 | 13 |
| Nanotechnology | 13 | 11 | 17 |
| Nuclear engineering | 9 | 13 | 11 |
| Petroleum engineering | 9 | 12 | 10 |
| Engineering nec | 58 | 69 | 80 |
| Health | 1,396 | 1,345 | 1,529 |
| Clinical medicine[a] | 1,121 | 1,044 | 1,195 |
| Anesthesiology | 38 | 38 | 42 |
| Cardiology | 37 | 33 | 37 |
| Endocrinology | 25 | 27 | 29 |
| Gastroenterology | 20 | 20 | 19 |
| Hematology | 20 | 22 | 28 |
| Neurology | 77 | 66 | 73 |
| Obstetrics and gynecology | 34 | 27 | 31 |
| Oncology and cancer research | 51 | 49 | 69 |
| Ophthalmology | 51 | 45 | 42 |
| Otorhinolaryngology | 26 | 29 | 27 |
| Pediatrics | 74 | 60 | 96 |
| Psychiatry | 50 | 52 | 47 |
| Public health | 116 | 119 | 135 |
| Pulmonary disease | 28 | 25 | 22 |
| Radiological sciences | 57 | 52 | 61 |
| Surgery | 107 | 113 | 127 |
| Clinical medicine nec | 310 | 267 | 310 |

TABLE A-5a

## Science, engineering, and health organizational units with nonfaculty researchers, by detailed field: 2017–19

(Number)

| Field | 2017 | 2018 | 2019 |
|---|---|---|---|
| Other health | 275 | 301 | 334 |
| Communication disorders sciences | 21 | 25 | 23 |
| Dental sciences | 28 | 33 | 35 |
| Nursing science | 32 | 40 | 38 |
| Pharmaceutical sciences | 66 | 63 | 77 |
| Veterinary biomedical and clinical sciences | 45 | 54 | 61 |
| Other health nec | 83 | 86 | 100 |

nec = not elsewhere classified.

[a] Clinical medicine includes nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-5b

## Science, engineering, and health organizational units with postdocs, by detailed field: 2017–19

(Number)

| Field | 2017 | 2018 | 2019 |
|---|---|---|---|
| All surveyed fields | 7,080 | 7,211 | 7,533 |
| Science and engineering | 5,057 | 5,156 | 5,338 |
| Science | 4,068 | 4,145 | 4,287 |
| Agricultural sciences | 179 | 187 | 183 |
| Biological and biomedical sciences | 1,725 | 1,733 | 1,745 |
| Biochemistry | 126 | 125 | 132 |
| Biology | 191 | 200 | 201 |
| Biomedical sciences | 59 | 60 | 61 |
| Biophysics | 13 | 15 | 18 |
| Biostatistics and bioinformatics | 82 | 84 | 79 |
| Biotechnology | 16 | 17 | 19 |
| Botany and plant biology | 46 | 48 | 49 |
| Cell, cellular biology, and anatomical sciences | 123 | 119 | 119 |
| Ecology and population biology | 62 | 58 | 52 |
| Epidemiology | 32 | 36 | 41 |
| Genetics | 94 | 91 | 93 |
| Microbiological sciences and immunology | 158 | 153 | 156 |
| Molecular biology | 34 | 39 | 41 |
| Neurobiology and neuroscience | 150 | 141 | 146 |
| Nutrition science | 32 | 41 | 44 |
| Pathology and experimental pathology | 81 | 81 | 82 |
| Pharmacology and toxicology | 108 | 101 | 98 |
| Physiology | 165 | 167 | 167 |
| Zoology and animal biology | 50 | 48 | 46 |
| Biological and biomedical sciences nec | 103 | 109 | 101 |
| Computer and information sciences | 174 | 163 | 179 |
| Computer science | 81 | 66 | 75 |
| Computer and information sciences, general | 63 | 57 | 72 |
| Computer and information sciences nec | 30 | 40 | 32 |
| Geosciences, atmospheric sciences, and ocean sciences | 251 | 250 | 266 |
| Atmospheric sciences and meteorology | 44 | 46 | 43 |
| Geological and earth sciences | 117 | 123 | 142 |
| Ocean and marine sciences | 59 | 53 | 54 |
| Geosciences, atmospheric sciences, and ocean sciences nec | 31 | 28 | 27 |
| Mathematics and statistics | 167 | 171 | 182 |
| Mathematics and applied mathematics | 132 | 130 | 140 |
| Statistics | 35 | 41 | 42 |
| Multidisciplinary and interdisciplinary studies | 187 | 181 | 177 |
| Natural resources and conservation | 120 | 137 | 148 |
| Environmental science and studies | 49 | 60 | 62 |
| Forestry, natural resources, and conservation | 71 | 77 | 86 |
| Physical sciences | 559 | 551 | 556 |
| Astronomy and astrophysics | 56 | 61 | 62 |
| Chemistry | 222 | 220 | 222 |
| Materials sciences | 31 | 27 | 31 |
| Physics | 228 | 225 | 222 |
| Physical sciences nec | 22 | 18 | 19 |
| Psychology | 202 | 215 | 214 |
| Clinical psychology | 21 | 19 | 18 |
| Counseling and applied psychology | 47 | 61 | 50 |
| Psychology, general | 105 | 103 | 110 |

TABLE A-5b

## Science, engineering, and health organizational units with postdocs, by detailed field: 2017–19

(Number)

| Field | 2017 | 2018 | 2019 |
|---|---|---|---|
| Research and experimental psychology | 29 | 32 | 36 |
| Social sciences | 504 | 557 | 637 |
| Agricultural economics | 19 | 21 | 22 |
| Anthropology | 57 | 54 | 59 |
| Criminal justice and safety studies | 1 | 7 | 8 |
| Economics (except agricultural) | 40 | 43 | 50 |
| Geography and cartography | 34 | 43 | 41 |
| History and philosophy of science | 7 | 7 | 12 |
| Human development | 36 | 34 | 41 |
| International relations and national security studies | 10 | 11 | 21 |
| Linguistics | 20 | 22 | 22 |
| Political science and government | 44 | 46 | 56 |
| Public policy analysis | 42 | 59 | 59 |
| Sociology | 61 | 65 | 69 |
| Social sciences nec | 133 | 145 | 177 |
| Engineering | 989 | 1,011 | 1,051 |
| Aerospace, aeronautical, and astronautical engineering | 31 | 29 | 31 |
| Agricultural engineering | 20 | 21 | 18 |
| Bioengineering and biomedical engineering | 123 | 121 | 130 |
| Biological and biosystems engineering | 10 | 15 | 15 |
| Chemical engineering | 115 | 122 | 118 |
| Civil engineering | 145 | 146 | 157 |
| Electrical, electronics, and communications engineering | 154 | 150 | 169 |
| Engineering mechanics, physics, and science | 19 | 19 | 18 |
| Industrial and manufacturing engineering | 41 | 46 | 44 |
| Mechanical engineering | 140 | 136 | 145 |
| Metallurgical and materials engineering | 57 | 63 | 73 |
| Mining engineering | 10 | 13 | 10 |
| Nanotechnology | 16 | 19 | 16 |
| Nuclear engineering | 13 | 14 | 13 |
| Petroleum engineering | 10 | 10 | 14 |
| Engineering nec | 85 | 87 | 80 |
| Health | 2,023 | 2,055 | 2,195 |
| Clinical medicine[a] | 1,597 | 1,605 | 1,741 |
| Anesthesiology | 50 | 48 | 55 |
| Cardiology | 59 | 59 | 61 |
| Endocrinology | 32 | 37 | 44 |
| Gastroenterology | 31 | 35 | 41 |
| Hematology | 27 | 27 | 38 |
| Neurology | 110 | 114 | 111 |
| Obstetrics and gynecology | 52 | 52 | 53 |
| Oncology and cancer research | 123 | 129 | 133 |
| Ophthalmology | 69 | 69 | 73 |
| Otorhinolaryngology | 32 | 34 | 35 |
| Pediatrics | 88 | 107 | 129 |
| Psychiatry | 86 | 76 | 77 |
| Public health | 143 | 149 | 159 |
| Pulmonary disease | 33 | 30 | 32 |
| Radiological sciences | 90 | 84 | 103 |
| Surgery | 158 | 164 | 187 |
| Clinical medicine nec | 414 | 391 | 410 |

TABLE A-5b

## Science, engineering, and health organizational units with postdocs, by detailed field: 2017–19

(Number)

| Field | 2017 | 2018 | 2019 |
|---|---|---|---|
| Other health | 426 | 450 | 454 |
| Communication disorders sciences | 28 | 32 | 33 |
| Dental sciences | 52 | 57 | 55 |
| Nursing science | 38 | 38 | 46 |
| Pharmaceutical sciences | 97 | 101 | 99 |
| Veterinary biomedical and clinical sciences | 77 | 80 | 81 |
| Other health nec | 134 | 142 | 140 |

nec = not elsewhere classified.

[a] Clinical medicine includes postdoctoral appointees in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-6

## Response rates for science, engineering, and health organizational units: 1975–2019

(Number and percent)

| Year | Total | Total response | | Complete response | | Partial response | | Nonresponse | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 1975[a] | 9,162 | 8,998 | 98.2 | 8,998 | 98.2 | NA | NA | 164 | 1.8 |
| 1976 | 9,275 | 9,148 | 98.6 | 9,148 | 98.6 | NA | NA | 127 | 1.4 |
| 1977 | 9,513 | 9,432 | 99.1 | 9,432 | 99.1 | NA | NA | 81 | 0.9 |
| 1978[b] | 8,242 | 8,077 | 98.0 | 8,077 | 98.0 | NA | NA | 165 | 2.0 |
| 1979 | 9,796 | 9,446 | 96.4 | 9,446 | 96.4 | NA | NA | 350 | 3.6 |
| 1980 | 9,930 | 9,593 | 96.6 | 9,593 | 96.6 | NA | NA | 337 | 3.4 |
| 1981 | 9,917 | 9,207 | 92.8 | 8,594 | 86.7 | 613 | 6.2 | 710 | 7.2 |
| 1982 | 9,776 | 8,848 | 90.5 | 8,104 | 82.9 | 744 | 7.6 | 928 | 9.5 |
| 1983 | 9,663 | 8,886 | 92.0 | 8,070 | 83.5 | 816 | 8.4 | 777 | 8.0 |
| 1984 | 8,748 | 8,133 | 93.0 | 7,490 | 85.6 | 643 | 7.4 | 615 | 7.0 |
| 1985 | 9,025 | 8,490 | 94.1 | 7,818 | 86.6 | 672 | 7.4 | 535 | 5.9 |
| 1986 | 9,097 | 8,596 | 94.5 | 7,817 | 85.9 | 779 | 8.6 | 501 | 5.5 |
| 1987 | 9,254 | 8,745 | 94.5 | 8,030 | 86.8 | 715 | 7.7 | 509 | 5.5 |
| 1988 | 10,295 | 9,782 | 95.0 | 8,812 | 85.6 | 970 | 9.4 | 513 | 5.0 |
| 1989 | 10,318 | 9,799 | 95.0 | 8,908 | 86.3 | 891 | 8.6 | 519 | 5.0 |
| 1990 | 10,483 | 9,937 | 94.8 | 8,884 | 84.7 | 1,053 | 10.0 | 546 | 5.2 |
| 1991 | 10,705 | 10,238 | 95.6 | 9,052 | 84.6 | 1,186 | 11.1 | 467 | 4.4 |
| 1992 | 10,936 | 10,604 | 97.0 | 9,066 | 82.9 | 1,538 | 14.1 | 332 | 3.0 |
| 1993 | 11,146 | 10,711 | 96.1 | 9,156 | 82.1 | 1,555 | 14.0 | 435 | 3.9 |
| 1994 | 11,411 | 10,972 | 96.2 | 8,863 | 77.7 | 2,109 | 18.5 | 439 | 3.8 |
| 1995 | 11,598 | 11,244 | 96.9 | 9,514 | 82.0 | 1,730 | 14.9 | 354 | 3.1 |
| 1996 | 11,592 | 11,373 | 98.1 | 9,851 | 85.0 | 1,522 | 13.1 | 219 | 1.9 |
| 1997 | 11,597 | 11,385 | 98.2 | 9,720 | 83.8 | 1,665 | 14.4 | 212 | 1.8 |
| 1998 | 11,718 | 11,528 | 98.4 | 9,822 | 83.8 | 1,706 | 14.6 | 190 | 1.6 |
| 1999 | 11,833 | 11,685 | 98.7 | 9,396 | 79.4 | 2,289 | 19.3 | 148 | 1.3 |
| 2000 | 11,899 | 11,783 | 99.0 | 9,818 | 82.5 | 1,965 | 16.5 | 116 | 1.0 |
| 2001 | 11,967 | 11,852 | 99.0 | 10,121 | 84.6 | 1,731 | 14.5 | 115 | 1.0 |
| 2002 | 12,126 | 12,001 | 99.0 | 10,434 | 86.0 | 1,567 | 12.9 | 125 | 1.0 |
| 2003 | 12,261 | 12,052 | 98.3 | 10,343 | 84.4 | 1,709 | 13.9 | 209 | 1.7 |
| 2004old[c] | 12,240 | 12,035 | 98.3 | 10,426 | 85.2 | 1,609 | 13.1 | 205 | 1.7 |
| 2004new[d] | 12,240 | 11,998 | 98.0 | 10,524 | 86.0 | 1,474 | 12.0 | 242 | 2.0 |
| 2005[d] | 12,396 | 12,053 | 97.2 | 10,783 | 87.0 | 1,270 | 10.2 | 343 | 2.8 |
| 2006[d] | 12,320 | 11,991 | 97.3 | 10,814 | 87.8 | 1,177 | 9.6 | 329 | 2.7 |
| 2007[e] | 12,629 | 12,310 | 97.5 | 11,020 | 87.3 | 1,290 | 10.2 | 319 | 2.5 |
| 2008 | 13,166 | 13,010 | 98.8 | 11,574 | 87.9 | 1,436 | 10.9 | 156 | 1.2 |
| 2009 | 13,285 | 13,187 | 99.3 | 11,709 | 88.1 | 1,478 | 11.1 | 98 | 0.7 |
| 2010[f] | 13,711 | 13,583 | 99.1 | 11,601 | 84.6 | 1,982 | 14.5 | 128 | 0.9 |
| 2011[f] | 13,785 | 13,627 | 98.9 | 11,622 | 84.3 | 2,005 | 14.5 | 158 | 1.1 |
| 2012 | 13,952 | 13,898 | 99.6 | 11,914 | 85.4 | 1,984 | 14.2 | 54 | 0.4 |
| 2013 | 14,019 | 13,979 | 99.7 | 12,056 | 86.0 | 1,923 | 13.7 | 40 | 0.3 |
| 2014old[g] | 14,369 | 14,336 | 99.8 | 12,413 | 86.4 | 1,923 | 13.4 | 33 | 0.2 |
| 2014new[g] | 14,845 | 14,798 | 99.7 | 12,832 | 86.4 | 1,966 | 13.2 | 47 | 0.3 |
| 2015 | 15,202 | 15,119 | 99.5 | 12,714 | 83.6 | 2,405 | 15.8 | 83 | 0.5 |
| 2016 | 15,853 | 15,774 | 99.5 | 13,617 | 85.9 | 2,157 | 13.6 | 79 | 0.5 |
| 2017[h] | 18,745 | 18,293 | 97.6 | 15,946 | 85.1 | 2,347 | 12.5 | 452 | 2.4 |
| 2018 | 19,592 | 19,384 | 98.9 | 16,410 | 83.8 | 2,974 | 15.2 | 208 | 1.1 |
| 2019 | 20,249 | 19,718 | 97.4 | 17,035 | 84.1 | 2,683 | 13.3 | 531 | 2.6 |

NA = not available; organizational units providing partial responses are included in complete response column prior to 1981 and reported separately beginning in 1981.

[a] 1976 survey also collected 1975 data from master's-granting institutions..

[b] Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

[c] Calculated using response-rate formula used through 2003. See appendix A, "**Technical Notes**."

[d] Calculated using response-rate formula used from 2004 to 2006. Schools closed in 2005 because of Hurricane Katrina were counted as nonrespondents.

[e] Calculated using response-rate formula implemented in 2007. See appendix A, "**Technical Notes**."

[f] The 2010 and 2011 postdoctoral appointees (postdocs) and doctorate-holding nonfaculty researcher data were reimputed following the 2012 data collection; these numbers have been updated to reflect the reimputed data and supersede those contained in previous reports.

[g] In 2014, the survey frame was updated following a comprehensive frame evaluation study. The study identified potentially eligible but not previously surveyed academic institutions in the United States with master's- or doctorate-granting programs in science, engineering, or health. A total of 151 newly eligible institutions were added, and two private for-profit institutions offering mostly practitioner-based graduate degrees were determined to be ineligible.

[h] In 2017, the data collection methods changed, substantially increasing the number of added units. In addition, several previously eligible fields became ineligible.

**Note(s):**

Percentages may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-7

## Imputation for nonresponse within graduate student totals, by field and type of graduate degree: 2018–19

(Number and percent)

| Year and field | Total in survey | | | | Number imputed | | | | Imputation rate (%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Master's students | | Doctoral students | | Master's students | | Doctoral students | | Master's students | | Doctoral students | |
| | Full time | Part time | Full time | Part time | Full time | Part time | Full time | Part time | Full time | Part time | Full time | Part time |
| Fall 2019, all surveyed fields | 254,532 | 153,696 | 247,910 | 33,979 | 7,995 | 3,251 | 5,258 | 527 | 3.1 | 2.1 | 2.1 | 1.6 |
| Science and engineering | 216,427 | 135,307 | 236,363 | 29,598 | 7,064 | 3,064 | 4,841 | 397 | 3.3 | 2.3 | 2.0 | 1.3 |
| Science | 158,704 | 101,091 | 172,969 | 20,927 | 6,069 | 2,496 | 4,140 | 299 | 3.8 | 2.5 | 2.4 | 1.4 |
| Agricultural sciences | 3,504 | 2,125 | 3,245 | 644 | 68 | 63 | 9 | 29 | 1.9 | 3.0 | 0.3 | 4.5 |
| Biological and biomedical sciences | 25,757 | 12,321 | 50,476 | 3,439 | 536 | 254 | 1,392 | 33 | 2.1 | 2.1 | 2.8 | 1.0 |
| Computer and information sciences | 47,535 | 36,557 | 14,585 | 2,607 | 3,354 | 1,170 | 386 | 93 | 7.1 | 3.2 | 2.6 | 3.6 |
| Geosciences, atmospheric sciences, and ocean sciences | 3,675 | 1,652 | 5,846 | 705 | 29 | 0 | 197 | 3 | 0.8 | 0.0 | 3.4 | 0.4 |
| Mathematics and statistics | 13,359 | 6,235 | 12,322 | 1,243 | 671 | 73 | 265 | 8 | 5.0 | 1.2 | 2.2 | 0.6 |
| Multidisciplinary and interdisciplinary studies | 4,669 | 3,534 | 2,364 | 614 | 184 | 63 | 47 | 3 | 3.9 | 1.8 | 2.0 | 0.5 |
| Natural resources and conservation | 5,176 | 2,890 | 2,925 | 752 | 74 | 30 | 87 | 1 | 1.4 | 1.0 | 3.0 | 0.1 |
| Physical sciences | 3,878 | 2,483 | 34,284 | 2,222 | 113 | 27 | 843 | 30 | 2.9 | 1.1 | 2.5 | 1.4 |
| Psychology | 24,547 | 16,291 | 16,546 | 3,685 | 743 | 459 | 191 | 50 | 3.0 | 2.8 | 1.2 | 1.4 |
| Social sciences | 26,604 | 17,003 | 30,376 | 5,016 | 297 | 357 | 723 | 49 | 1.1 | 2.1 | 2.4 | 1.0 |
| Engineering | 57,723 | 34,216 | 63,394 | 8,671 | 995 | 568 | 701 | 98 | 1.7 | 1.7 | 1.1 | 1.1 |
| Aerospace, aeronautical, and astronautical engineering | 2,197 | 1,504 | 2,238 | 316 | 13 | 1 | 37 | 0 | 0.6 | 0.1 | 1.7 | 0.0 |
| Agricultural engineering | 393 | 101 | 561 | 101 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bioengineering and biomedical engineering | 3,353 | 982 | 7,100 | 615 | 149 | 25 | 157 | 3 | 4.4 | 2.5 | 2.2 | 0.5 |
| Biological and biosystems engineering | 64 | 25 | 167 | 52 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Chemical engineering | 1,888 | 744 | 6,677 | 380 | 1 | 2 | 67 | 3 | 0.1 | 0.3 | 1.0 | 0.8 |
| Civil engineering | 7,576 | 4,297 | 6,726 | 1,026 | 10 | 4 | 28 | 0 | 0.1 | 0.1 | 0.4 | 0.0 |
| Electrical, electronics, and communications engineering | 19,138 | 9,039 | 16,288 | 2,289 | 653 | 253 | 206 | 68 | 3.4 | 2.8 | 1.3 | 3.0 |
| Engineering mechanics, physics, and science | 563 | 289 | 1,320 | 127 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Industrial and manufacturing engineering | 6,247 | 5,665 | 2,939 | 823 | 16 | 78 | 22 | 2 | 0.3 | 1.4 | 0.7 | 0.2 |
| Mechanical engineering | 9,394 | 5,467 | 9,951 | 1,296 | 103 | 170 | 83 | 7 | 1.1 | 3.1 | 0.8 | 0.5 |
| Metallurgical and materials engineering | 1,409 | 565 | 4,243 | 373 | 5 | 4 | 50 | 0 | 0.4 | 0.7 | 1.2 | 0.0 |
| Mining engineering | 202 | 90 | 159 | 42 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Nanotechnology | 38 | 11 | 141 | 5 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Nuclear engineering | 307 | 111 | 879 | 152 | 3 | 0 | 25 | 0 | 1.0 | 0.0 | 2.8 | 0.0 |
| Petroleum engineering | 441 | 201 | 543 | 64 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Engineering nec | 4,513 | 5,125 | 3,462 | 1,010 | 42 | 31 | 26 | 15 | 0.9 | 0.6 | 0.8 | 1.5 |
| Health | 38,105 | 18,389 | 11,547 | 4,381 | 931 | 187 | 417 | 130 | 2.4 | 1.0 | 3.6 | 3.0 |
| Clinical medicine[a] | 15,638 | 10,613 | 3,286 | 1,285 | 270 | 127 | 34 | 1 | 1.7 | 1.2 | 1.0 | 0.1 |
| Other health | 22,467 | 7,776 | 8,261 | 3,096 | 661 | 60 | 383 | 129 | 2.9 | 0.8 | 4.6 | 4.2 |
| Fall 2018, all surveyed fields | 248,552 | 142,659 | 242,897 | 34,199 | 4,090 | 1,553 | 2,603 | 135 | 1.6 | 1.1 | 1.1 | 0.4 |
| Science and engineering | 210,287 | 124,104 | 231,297 | 29,868 | 3,579 | 1,285 | 2,562 | 125 | 1.7 | 1.0 | 1.1 | 0.4 |
| Science | 151,059 | 90,268 | 170,004 | 20,924 | 3,212 | 1,026 | 1,897 | 107 | 2.1 | 1.1 | 1.1 | 0.5 |
| Agricultural sciences | 3,626 | 2,032 | 3,273 | 607 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |

TABLE A-7

## Imputation for nonresponse within graduate student totals, by field and type of graduate degree: 2018–19

(Number and percent)

| Year and field | Total in survey | | | | Number imputed | | | | Imputation rate (%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Master's students | | Doctoral students | | Master's students | | Doctoral students | | Master's students | | Doctoral students | |
| | Full time | Part time | Full time | Part time | Full time | Part time | Full time | Part time | Full time | Part time | Full time | Part time |
| Biological and biomedical sciences | 24,759 | 10,547 | 49,254 | 3,373 | 222 | 102 | 306 | 39 | 0.9 | 1.0 | 0.6 | 1.2 |
| Computer and information sciences | 44,193 | 33,158 | 13,596 | 2,531 | 1,660 | 313 | 257 | 8 | 3.8 | 0.9 | 1.9 | 0.3 |
| Geosciences, atmospheric sciences, and ocean sciences | 3,820 | 1,809 | 5,950 | 754 | 13 | 6 | 56 | 0 | 0.3 | 0.3 | 0.9 | 0.0 |
| Mathematics and statistics | 12,707 | 5,366 | 12,248 | 1,140 | 676 | 98 | 146 | 24 | 5.3 | 1.8 | 1.2 | 2.1 |
| Multidisciplinary and interdisciplinary studies | 4,268 | 3,146 | 2,388 | 536 | 123 | 159 | 284 | 3 | 2.9 | 5.1 | 11.9 | 0.6 |
| Natural resources and conservation | 5,072 | 2,619 | 2,962 | 754 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Physical sciences | 3,915 | 2,160 | 33,756 | 2,244 | 76 | 45 | 368 | 2 | 1.9 | 2.1 | 1.1 | 0.1 |
| Psychology | 21,987 | 13,417 | 16,538 | 3,765 | 332 | 233 | 108 | 15 | 1.5 | 1.7 | 0.7 | 0.4 |
| Social sciences | 26,712 | 16,014 | 30,039 | 5,220 | 110 | 70 | 372 | 16 | 0.4 | 0.4 | 1.2 | 0.3 |
| Engineering | 59,228 | 33,836 | 61,293 | 8,944 | 367 | 259 | 665 | 18 | 0.6 | 0.8 | 1.1 | 0.2 |
| Aerospace, aeronautical, and astronautical engineering | 2,128 | 1,214 | 2,173 | 333 | 13 | 1 | 36 | 0 | 0.6 | 0.1 | 1.7 | 0.0 |
| Agricultural engineering | 286 | 85 | 572 | 89 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bioengineering and biomedical engineering | 3,369 | 833 | 6,564 | 714 | 12 | 0 | 51 | 3 | 0.4 | 0.0 | 0.8 | 0.4 |
| Biological and biosystems engineering | 50 | 30 | 149 | 54 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Chemical engineering | 2,220 | 841 | 6,583 | 367 | 51 | 67 | 124 | 9 | 2.3 | 8.0 | 1.9 | 2.5 |
| Civil engineering | 8,289 | 4,440 | 6,573 | 1,159 | 6 | 0 | 27 | 0 | 0.1 | 0.0 | 0.4 | 0.0 |
| Electrical, electronics, and communications engineering | 19,341 | 8,767 | 15,473 | 2,646 | 181 | 96 | 212 | 1 | 0.9 | 1.1 | 1.4 | * |
| Engineering mechanics, physics, and science | 472 | 257 | 1,296 | 132 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Industrial and manufacturing engineering | 6,492 | 5,897 | 2,901 | 697 | 54 | 36 | 58 | 0 | 0.8 | 0.6 | 2.0 | 0.0 |
| Mechanical engineering | 10,178 | 5,256 | 9,898 | 1,261 | 41 | 55 | 79 | 5 | 0.4 | 1.0 | 0.8 | 0.4 |
| Metallurgical and materials engineering | 1,539 | 540 | 4,284 | 326 | 6 | 4 | 51 | 0 | 0.4 | 0.7 | 1.2 | 0.0 |
| Mining engineering | 211 | 105 | 170 | 41 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Nanotechnology | 32 | 15 | 71 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | - |
| Nuclear engineering | 273 | 134 | 935 | 111 | 3 | 0 | 27 | 0 | 1.1 | 0.0 | 2.9 | 0.0 |
| Petroleum engineering | 477 | 277 | 579 | 70 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Engineering nec | 3,871 | 5,145 | 3,072 | 944 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Health | 38,265 | 18,555 | 11,600 | 4,331 | 511 | 268 | 41 | 10 | 1.3 | 1.4 | 0.4 | 0.2 |
| Clinical medicine[a] | 16,233 | 11,261 | 3,423 | 1,085 | 318 | 199 | 0 | 0 | 2.0 | 1.8 | 0.0 | 0.0 |
| Other health | 22,032 | 7,294 | 8,177 | 3,246 | 193 | 69 | 41 | 10 | 0.9 | 0.9 | 0.5 | 0.3 |

- = not calculable; * = value < 0.05%.

nec = not elsewhere classified.

[a] Clinical medicine includes graduate students in public health and clinical medicine nec.

**Note(s):**
Master's and doctoral students were not reported separately until 2017. Sum of the broad fields may not add to total because of rounding.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE A-8

## Imputation for nonresponse in postdoc and nonfaculty research totals, by field: 2018–19

(Number and percent)

| Year and field | Total in survey | | Number imputed | | Imputation rate (%) | |
|---|---|---|---|---|---|---|
| | Postdoctoral appointees | Doctorate nonfaculty researchers | Postdoctoral appointees | Doctorate nonfaculty researchers | Postdoctoral appointees | Doctorate nonfaculty researchers |
| Fall 2019, all surveyed fields | 66,247 | 30,349 | 2,986 | 2,886 | 4.5 | 9.5 |
| Science and engineering | 46,769 | 22,728 | 1,585 | 2,257 | 3.4 | 9.9 |
| Science | 38,503 | 18,819 | 1,327 | 1,863 | 3.4 | 9.9 |
| Agricultural sciences | 1,079 | 645 | 10 | 90 | 0.9 | 14.0 |
| Biological and biomedical sciences | 21,847 | 8,229 | 864 | 924 | 4.0 | 11.2 |
| Computer and information sciences | 878 | 510 | 27 | 24 | 3.1 | 4.7 |
| Geosciences, atmospheric sciences, and ocean sciences | 1,778 | 2,177 | 37 | 108 | 2.1 | 5.0 |
| Mathematics and statistics | 1,070 | 305 | 27 | 34 | 2.5 | 11.1 |
| Multidisciplinary and interdisciplinary studies | 972 | 820 | 24 | 17 | 2.5 | 2.1 |
| Natural resources and conservation | 806 | 582 | 21 | 25 | 2.6 | 4.3 |
| Physical sciences | 7,159 | 3,316 | 196 | 509 | 2.7 | 15.3 |
| Psychology | 1,152 | 576 | 71 | 26 | 6.2 | 4.5 |
| Social sciences | 1,762 | 1,659 | 50 | 106 | 2.8 | 6.4 |
| Engineering | 8,266 | 3,909 | 258 | 394 | 3.1 | 10.1 |
| Aerospace, aeronautical, and astronautical engineering | 227 | 124 | 3 | 9 | 1.3 | 7.3 |
| Agricultural engineering | 112 | 55 | 0 | 0 | 0.0 | 0.0 |
| Bioengineering and biomedical engineering | 1,515 | 492 | 119 | 74 | 7.9 | 15.0 |
| Biological and biosystems engineering | 87 | 53 | 0 | 5 | 0.0 | 9.4 |
| Chemical engineering | 1,157 | 328 | 24 | 45 | 2.1 | 13.7 |
| Civil engineering | 865 | 492 | 11 | 41 | 1.3 | 8.3 |
| Electrical, electronics, and communications engineering | 1,305 | 637 | 35 | 82 | 2.7 | 12.9 |
| Engineering mechanics, physics, and science | 180 | 186 | 0 | 4 | 0.0 | 2.2 |
| Industrial and manufacturing engineering | 167 | 137 | 16 | 49 | 9.6 | 35.8 |
| Mechanical engineering | 1,142 | 531 | 24 | 33 | 2.1 | 6.2 |
| Metallurgical and materials engineering | 642 | 242 | 17 | 7 | 2.6 | 2.9 |
| Mining engineering | 23 | 61 | 0 | 3 | 0.0 | 4.9 |
| Nanotechnology | 151 | 76 | 0 | 0 | 0.0 | 0.0 |
| Nuclear engineering | 80 | 41 | 0 | 6 | 0.0 | 14.6 |
| Petroleum engineering | 72 | 82 | 0 | 32 | 0.0 | 39.0 |
| Engineering nec | 541 | 372 | 9 | 4 | 1.7 | 1.1 |
| Health | 19,478 | 7,621 | 1,401 | 629 | 7.2 | 8.3 |
| Clinical medicine[a] | 16,650 | 6,273 | 1,290 | 552 | 7.7 | 8.8 |
| Other health | 2,828 | 1,348 | 111 | 77 | 3.9 | 5.7 |
| Fall 2018, all surveyed fields | 64,783 | 29,284 | 2,254 | 2,937 | 3.5 | 10.0 |

TABLE A-8

## Imputation for nonresponse in postdoc and nonfaculty research totals, by field: 2018–19

(Number and percent)

| Year and field | Total in survey | | Number imputed | | Imputation rate (%) | |
|---|---|---|---|---|---|---|
| | Postdoctoral appointees | Doctorate nonfaculty researchers | Postdoctoral appointees | Doctorate nonfaculty researchers | Postdoctoral appointees | Doctorate nonfaculty researchers |
| Science and engineering | 45,478 | 21,848 | 1,571 | 2,231 | 3.5 | 10.2 |
| Science | 37,564 | 18,278 | 1,475 | 1,887 | 3.9 | 10.3 |
| Agricultural sciences | 1,072 | 565 | 14 | 0 | 1.3 | 0.0 |
| Biological and biomedical sciences | 21,533 | 8,250 | 861 | 1,097 | 4.0 | 13.3 |
| Computer and information sciences | 879 | 515 | 20 | 42 | 2.3 | 8.2 |
| Geosciences, atmospheric sciences, and ocean sciences | 1,726 | 2,106 | 145 | 90 | 8.4 | 4.3 |
| Mathematics and statistics | 982 | 266 | 11 | 53 | 1.1 | 19.9 |
| Multidisciplinary and interdisciplinary studies | 980 | 832 | 122 | 23 | 12.4 | 2.8 |
| Natural resources and conservation | 764 | 580 | 4 | 5 | 0.5 | 0.9 |
| Physical sciences | 6,976 | 3,056 | 265 | 446 | 3.8 | 14.6 |
| Psychology | 1,145 | 507 | 19 | 29 | 1.7 | 5.7 |
| Social sciences | 1,507 | 1,601 | 14 | 102 | 0.9 | 6.4 |
| Engineering | 7,914 | 3,570 | 96 | 344 | 1.2 | 9.6 |
| Aerospace, aeronautical, and astronautical engineering | 207 | 115 | 2 | 11 | 1.0 | 9.6 |
| Agricultural engineering | 113 | 60 | 0 | 0 | 0.0 | 0.0 |
| Bioengineering and biomedical engineering | 1,433 | 440 | 9 | 47 | 0.6 | 10.7 |
| Biological and biosystems engineering | 96 | 51 | 0 | 0 | 0.0 | 0.0 |
| Chemical engineering | 1,142 | 257 | 8 | 10 | 0.7 | 3.9 |
| Civil engineering | 739 | 414 | 5 | 31 | 0.7 | 7.5 |
| Electrical, electronics, and communications engineering | 1,197 | 588 | 22 | 103 | 1.8 | 17.5 |
| Engineering mechanics, physics, and science | 354 | 220 | 19 | 8 | 5.4 | 3.6 |
| Industrial and manufacturing engineering | 156 | 105 | 8 | 32 | 5.1 | 30.5 |
| Mechanical engineering | 1,069 | 489 | 8 | 39 | 0.7 | 8.0 |
| Metallurgical and materials engineering | 549 | 215 | 0 | 0 | 0.0 | 0.0 |
| Mining engineering | 26 | 52 | 0 | 0 | 0.0 | 0.0 |
| Nanotechnology | 134 | 43 | 0 | 0 | 0.0 | 0.0 |
| Nuclear engineering | 106 | 41 | 7 | 8 | 6.6 | 19.5 |
| Petroleum engineering | 63 | 80 | 0 | 32 | 0.0 | 40.0 |
| Engineering nec | 530 | 400 | 8 | 23 | 1.5 | 5.8 |
| Health | 19,305 | 7,436 | 683 | 706 | 3.5 | 9.5 |
| Clinical medicine[a] | 16,563 | 6,159 | 572 | 637 | 3.5 | 10.3 |
| Other health | 2,742 | 1,277 | 111 | 69 | 4.0 | 5.4 |
| Fall 2017, all surveyed fields | 64,733 | 28,180 | 2,229 | 1,792 | 3.4 | 6.4 |
| Science and engineering | 46,080 | 20,542 | 1,604 | 1,372 | 3.5 | 6.7 |

TABLE A-8

## Imputation for nonresponse in postdoc and nonfaculty research totals, by field: 2018–19

(Number and percent)

| Year and field | Total in survey | | Number imputed | | Imputation rate (%) | |
|---|---|---|---|---|---|---|
| | Postdoctoral appointees | Doctorate nonfaculty researchers | Postdoctoral appointees | Doctorate nonfaculty researchers | Postdoctoral appointees | Doctorate nonfaculty researchers |
| Science | 38,241 | 17,268 | 1,540 | 1,200 | 4.0 | 6.9 |
| Agricultural sciences | 1,024 | 496 | 9 | 3 | 0.9 | 0.6 |
| Biological and biomedical sciences | 21,781 | 8,203 | 803 | 681 | 3.7 | 8.3 |
| Computer and information sciences | 854 | 476 | 30 | 33 | 3.5 | 6.9 |
| Geosciences, atmospheric sciences, and ocean sciences | 2,089 | 1,794 | 52 | 29 | 2.5 | 1.6 |
| Mathematics and statistics | 991 | 240 | 55 | 8 | 5.5 | 3.3 |
| Multidisciplinary and interdisciplinary studies | 1,131 | 806 | 145 | 18 | 12.8 | 2.2 |
| Natural resources and conservation | 731 | 364 | 15 | 1 | 2.1 | 0.3 |
| Physical sciences | 7,211 | 2,871 | 385 | 389 | 5.3 | 13.5 |
| Psychology | 1,082 | 494 | 30 | 8 | 2.8 | 1.6 |
| Social sciences | 1,347 | 1,524 | 16 | 30 | 1.2 | 2.0 |
| Engineering | 7,839 | 3,274 | 64 | 172 | 0.8 | 5.3 |
| Aerospace, aeronautical, and astronautical engineering | 196 | 102 | 1 | 1 | 0.5 | 1.0 |
| Agricultural engineering | 111 | 52 | 0 | 0 | 0.0 | 0.0 |
| Bioengineering and biomedical engineering | 1,398 | 415 | 19 | 19 | 1.4 | 4.6 |
| Biological and biosystems engineering | 78 | 36 | 0 | 0 | 0.0 | 0.0 |
| Chemical engineering | 1,197 | 281 | 6 | 29 | 0.5 | 10.3 |
| Civil engineering | 804 | 422 | 6 | 19 | 0.7 | 4.5 |
| Electrical, electronics, and communications engineering | 1,170 | 557 | 5 | 36 | 0.4 | 6.5 |
| Engineering mechanics, physics, and science | 316 | 200 | 0 | 0 | 0.0 | 0.0 |
| Industrial and manufacturing engineering | 127 | 119 | 2 | 26 | 1.6 | 21.8 |
| Mechanical engineering | 1,089 | 458 | 10 | 27 | 0.9 | 5.9 |
| Metallurgical and materials engineering | 550 | 181 | 12 | 12 | 2.2 | 6.6 |
| Mining engineering | 15 | 52 | 0 | 1 | 0.0 | 1.9 |
| Nanotechnology | 85 | 33 | 0 | 0 | 0.0 | 0.0 |
| Nuclear engineering | 94 | 22 | 0 | 2 | 0.0 | 9.1 |
| Petroleum engineering | 65 | 59 | 0 | 0 | 0.0 | 0.0 |
| Engineering nec | 544 | 285 | 3 | 0 | 0.6 | 0.0 |
| Health | 18,653 | 7,638 | 625 | 420 | 3.4 | 5.5 |
| Clinical medicine | 16,100 | 6,448 | 503 | 343 | 3.1 | 5.3 |
| Other health | 2,553 | 1,190 | 122 | 77 | 4.8 | 6.5 |

nec = not elsewhere classified.

[a] Clinical medicine includes postdoctoral appointees and nonfaculty researchers in anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics and gynecology, oncology and cancer research, ophthalmology, otorhinolaryngology, pediatrics, psychiatry, public health, pulmonary disease, radiology, surgery, and clinical medicine nec.

**Note(s):**

"Field" refers to the field of the unit that reports postdoctoral appointees and doctorate-holding nonfaculty researchers to the Survey of Graduate Students and Postdoctorates in Science and Engineering. Sum of the broad fields may not add to total because of rounding.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-9

## Imputation for graduate students in science, engineering, and health fields, by citizenship, ethnicity, race, enrollment status, and sex: 2019

(Number and percent)

| Citizenship, ethnicity, and race | Part time | | | Full time | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | First time | | |
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| Doctoral students, imputation rate (%) | | | | | | | | | |
| All doctoral students | 1.6 | 2.0 | 1.8 | 2.1 | 2.6 | 2.8 | 2.4 | 2.8 | 2.7 |
| U.S. citizens and permanent residents[a] | | | | | | | | | |
| Hispanic or Latino | 1.3 | 1.3 | 1.4 | 3.6 | 3.4 | 4.1 | 3.0 | 2.6 | 3.6 |
| Not Hispanic or Latino | | | | | | | | | |
| American Indian or Alaska Native | 2.2 | 0.0 | 3.4 | 1.3 | 1.2 | 1.4 | 0.9 | 0.0 | 1.4 |
| Asian | 2.7 | 3.8 | 1.8 | 3.2 | 3.1 | 3.5 | 3.4 | 3.7 | 3.1 |
| Black or African American | 3.0 | 2.9 | 3.4 | 2.7 | 2.9 | 3.2 | 3.2 | 4.0 | 2.7 |
| Native Hawaiian or Other Pacific Islander | 14.0 | 31.6 | 0.0 | 2.5 | 1.4 | 2.3 | 4.2 | 7.1 | 0.0 |
| White | 1.3 | 1.5 | 1.4 | 2.4 | 2.9 | 2.5 | 2.8 | 3.1 | 2.8 |
| More than one race | 3.1 | 4.5 | 1.8 | 2.0 | 1.8 | 2.2 | 3.0 | 2.0 | 3.8 |
| Unknown ethnicity and race | 2.3 | 2.2 | 2.8 | 3.6 | 3.7 | 3.8 | 5.1 | 3.7 | 7.2 |
| Temporary visa holders | 1.9 | 2.1 | 2.1 | 1.6 | 1.7 | 1.9 | 1.8 | 2.1 | 1.6 |
| Doctoral students, number imputed[b] | | | | | | | | | |
| All doctoral students | 527 | 371 | 281 | 5,258 | 3,702 | 2,990 | 1,097 | 720 | 576 |
| U.S. citizens and permanent residents[a] | | | | | | | | | |
| Hispanic or Latino | 30 | 14 | 17 | 553 | 256 | 319 | 98 | 41 | 61 |
| Not Hispanic or Latino | | | | | | | | | |
| American Indian or Alaska Native | 3 | 0 | 3 | 8 | 3 | 5 | 1 | 0 | 1 |
| Asian | 57 | 43 | 18 | 488 | 249 | 261 | 102 | 55 | 47 |
| Black or African American | 75 | 30 | 50 | 218 | 90 | 157 | 52 | 25 | 27 |
| Native Hawaiian or Other Pacific Islander | 6 | 6 | 0 | 4 | 1 | 2 | 1 | 1 | 0 |
| White | 214 | 131 | 107 | 2,208 | 1,396 | 1,114 | 481 | 266 | 240 |
| More than one race | 23 | 16 | 7 | 103 | 47 | 61 | 31 | 10 | 21 |
| Unknown ethnicity and race | 32 | 16 | 18 | 228 | 128 | 112 | 52 | 19 | 36 |
| Temporary visa holders | 165 | 119 | 61 | 1,673 | 1,138 | 706 | 356 | 250 | 119 |
| Master's students, imputation rate (%) | | | | | | | | | |
| All master's students | 2.1 | 3.2 | 3.3 | 3.1 | 3.9 | 3.3 | 2.9 | 3.2 | 3.2 |
| U.S. citizens and permanent residents[a] | | | | | | | | | |
| Hispanic or Latino | 2.1 | 1.9 | 2.4 | 2.9 | 2.6 | 3.0 | 2.4 | 2.5 | 2.4 |
| Not Hispanic or Latino | | | | | | | | | |
| American Indian or Alaska Native | 2.4 | 2.9 | 2.1 | 2.8 | 2.8 | 3.1 | 2.2 | 1.7 | 3.0 |
| Asian | 2.4 | 2.4 | 2.4 | 2.5 | 2.4 | 2.6 | 2.7 | 2.8 | 2.7 |
| Black or African American | 4.8 | 5.3 | 5.0 | 4.4 | 4.3 | 4.5 | 4.0 | 3.9 | 4.1 |
| Native Hawaiian or Other Pacific Islander | 1.2 | 0.8 | 1.6 | 3.9 | 5.6 | 2.5 | 16.9 | 20.7 | 14.1 |
| White | 2.0 | 1.9 | 2.4 | 2.2 | 2.1 | 2.4 | 2.6 | 2.3 | 2.8 |
| More than one race | 1.7 | 1.8 | 1.7 | 2.0 | 2.2 | 1.9 | 2.0 | 2.2 | 2.0 |
| Unknown ethnicity and race | 4.4 | 4.8 | 4.8 | 5.2 | 4.4 | 5.9 | 13.7 | 10.8 | 16.0 |
| Temporary visa holders | 4.1 | 4.1 | 4.3 | 4.9 | 5.5 | 4.1 | 3.2 | 3.5 | 2.9 |
| Master's students, number imputed[b] | | | | | | | | | |
| All master's students | 3,251 | 2,658 | 2,334 | 7,995 | 4,818 | 4,293 | 3,362 | 1,825 | 1,928 |
| U.S. citizens and permanent residents[a] | | | | | | | | | |
| Hispanic or Latino | 340 | 150 | 202 | 587 | 198 | 395 | 220 | 83 | 137 |
| Not Hispanic or Latino | | | | | | | | | |
| American Indian or Alaska Native | 14 | 7 | 7 | 21 | 8 | 14 | 7 | 2 | 6 |
| Asian | 345 | 205 | 144 | 423 | 190 | 236 | 230 | 110 | 122 |
| Black or African American | 654 | 316 | 385 | 618 | 202 | 418 | 249 | 79 | 170 |

TABLE A-9

## Imputation for graduate students in science, engineering, and health fields, by citizenship, ethnicity, race, enrollment status, and sex: 2019

(Number and percent)

| Citizenship, ethnicity, and race | Part time | | | Full time | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | First time | | |
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| Native Hawaiian or Other Pacific Islander | 3 | 1 | 2 | 11 | 7 | 4 | 23 | 12 | 11 |
| White | 1,498 | 771 | 840 | 1,966 | 764 | 1,262 | 998 | 365 | 642 |
| More than one race | 67 | 36 | 34 | 113 | 48 | 62 | 51 | 22 | 29 |
| Unknown ethnicity and race | 382 | 207 | 216 | 397 | 135 | 268 | 436 | 141 | 301 |
| Temporary visa holders | 834 | 526 | 329 | 4,887 | 3,353 | 1,610 | 1,530 | 1,003 | 554 |

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] This table reports sum of counts imputed in each of these cells and variables. Because some units report totals without complete details, the sum of the imputed details will often be higher than the related total.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE A-10

## Imputation for full-time graduate students in science, engineering, and health fields, by mechanism of support, sex, and source of support: 2019

(Number and percent)

| Mechanism of support and sex | All sources | Federal | | | | | | | | Domestic | Foreign | Institutional | Self-support |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DOD | DOE | HHS NIH | HHS Other | NASA | NSF | USDA | Other | | | | |
| Doctoral students, imputation rate (%) | | | | | | | | | | | | | |
| All full-time doctoral students | 2.1 | 5.7 | 4.2 | 6.5 | 3.7 | 8.5 | 6.6 | 3.6 | 6.9 | 6.1 | 5.8 | 7.7 | 14.2 |
| Fellowships | 6.3 | 3.2 | 4.1 | 4.6 | 0.0 | 6.0 | 5.7 | 1.4 | 7.8 | 6.9 | 9.2 | 6.5 | na |
| Research assistantships | 6.7 | 5.6 | 4.1 | 7.2 | 3.8 | 8.4 | 6.8 | 3.3 | 6.4 | 5.7 | 3.2 | 7.8 | na |
| Teaching assistantships | 8.1 | na | 14.3 | na | 11.4 | 33.3 | 7.9 | 5.5 | 4.1 | 4.2 | 3.5 | 8.2 | na |
| Traineeships | 4.0 | 0.0 | 0.0 | 5.2 | 3.8 | 12.1 | 6.3 | 0.0 | 1.7 | 0.6 | 2.9 | 3.0 | na |
| Other types of support | 12.4 | 11.9 | 2.2 | 8.0 | 0.0 | 23.1 | 8.7 | 15.2 | 12.8 | 15.1 | 10.8 | 9.9 | 14.2 |
| Male | 2.6 | 5.1 | 4.2 | 6.7 | 3.7 | 8.6 | 6.6 | 2.5 | 6.5 | 6.7 | 5.0 | 7.9 | 12.9 |
| Female | 2.8 | 7.8 | 5.3 | 7.0 | 4.2 | 9.2 | 6.9 | 4.8 | 7.4 | 6.0 | 7.2 | 7.8 | 15.9 |
| Doctoral students, number imputed[a] | | | | | | | | | | | | | |
| All full-time doctoral students | 5,258 | 343 | 195 | 1,291 | 74 | 152 | 1,312 | 58 | 433 | 872 | 185 | 11,226 | 3,218 |
| Fellowships | 2,403 | 15 | 8 | 97 | 0 | 14 | 240 | 1 | 60 | 126 | 50 | 1,806 | na |
| Research assistantships | 6,404 | 295 | 181 | 936 | 61 | 121 | 969 | 46 | 299 | 596 | 52 | 2,881 | na |
| Teaching assistantships | 5,263 | na | 5 | na | 4 | 3 | 51 | 4 | 8 | 17 | 11 | 5,189 | na |
| Traineeships | 407 | 0 | 0 | 231 | 9 | 8 | 27 | 0 | 3 | 3 | 2 | 124 | na |
| Other types of support | 4,931 | 33 | 1 | 27 | 0 | 6 | 27 | 7 | 63 | 146 | 70 | 1,391 | 3,218 |
| Male | 3,702 | 233 | 146 | 645 | 37 | 102 | 822 | 20 | 248 | 580 | 104 | 6,400 | 1,492 |
| Female | 2,990 | 112 | 64 | 724 | 43 | 55 | 497 | 38 | 185 | 330 | 80 | 5,044 | 1,756 |
| Master's students, imputation rate (%) | | | | | | | | | | | | | |
| All full-time master's students | 3.1 | 5.6 | 5.8 | 7.7 | 3.0 | 6.5 | 8.2 | 5.0 | 10.1 | 8.7 | 11.0 | 10.2 | 11.8 |
| Fellowships | 11.5 | 11.3 | 5.3 | 12.3 | 0.0 | 0.0 | 8.7 | 33.3 | 9.7 | 5.2 | 6.8 | 12.4 | na |
| Research assistantships | 8.7 | 8.9 | 5.5 | 8.9 | 0.3 | 8.0 | 9.1 | 4.7 | 6.5 | 6.6 | 7.0 | 10.2 | na |
| Teaching assistantships | 9.8 | na | 0.0 | na | 12.5 | 0.0 | 4.5 | 3.2 | 15.3 | 24.0 | 1.2 | 10.1 | na |
| Traineeships | 6.2 | 7.1 | 0.0 | 3.7 | 11.3 | - | 0.0 | 8.3 | 4.0 | 4.4 | 0.0 | 6.7 | na |
| Other types of support | 11.7 | 3.6 | 11.5 | 3.9 | 8.9 | 0.0 | 5.9 | 9.4 | 12.6 | 12.1 | 15.1 | 10.1 | 11.8 |
| Male | 3.9 | 4.8 | 6.1 | 6.8 | 1.0 | 5.1 | 9.0 | 5.6 | 8.3 | 9.1 | 9.9 | 10.4 | 12.1 |
| Female | 3.3 | 8.6 | 4.7 | 8.4 | 4.6 | 9.1 | 7.4 | 4.6 | 11.5 | 8.2 | 12.8 | 10.3 | 11.8 |
| Master's students, number imputed[a] | | | | | | | | | | | | | |
| All full-time master's students | 7,995 | 139 | 26 | 81 | 14 | 18 | 168 | 49 | 377 | 426 | 167 | 6,122 | 20,865 |
| Fellowships | 886 | 12 | 1 | 8 | 0 | 0 | 18 | 1 | 25 | 26 | 9 | 788 | na |
| Research assistantships | 1,772 | 67 | 22 | 62 | 1 | 18 | 128 | 40 | 84 | 167 | 22 | 1,190 | na |
| Teaching assistantships | 2,293 | na | 0 | na | 1 | 0 | 9 | 2 | 25 | 44 | 2 | 2,264 | na |

TABLE A-10

## Imputation for full-time graduate students in science, engineering, and health fields, by mechanism of support, sex, and source of support: 2019

(Number and percent)

| Mechanism of support and sex | All sources | Federal | | | | | | | | Domestic | Foreign | Institutional | Self-support |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DOD | DOE | HHS | | NASA | NSF | USDA | Other | | | | |
| | | | | NIH | Other | | | | | | | | |
| Traineeships | 135 | 1 | 0 | 5 | 8 | 0 | 0 | 1 | 4 | 9 | 0 | 107 | na |
| Other types of support | 23,424 | 59 | 3 | 6 | 4 | 0 | 13 | 5 | 239 | 180 | 134 | 1,820 | 20,865 |
| Male | 4,818 | 95 | 21 | 30 | 2 | 9 | 111 | 25 | 138 | 239 | 91 | 3,013 | 10,208 |
| Female | 4,293 | 44 | 5 | 51 | 12 | 9 | 60 | 24 | 237 | 187 | 76 | 3,207 | 10,846 |

na = not applicable; not asked because this support mechanism does not apply.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] This table reports sum of counts imputed in each of these cells and variables. Because some units report totals without complete details, the sum of the imputed details will often be higher than the related total.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE A-11

## Imputation for postdoctoral appointees in science, engineering, and health fields, by citizenship, ethnicity, race, and sex: 2019

(Number and percent)

| Citizenship, ethnicity, and race | Total | Male | Female |
|---|---|---|---|
| Imputation rate (%) | | | |
| All postdoctoral appointees | 4.5 | 5.2 | 5.3 |
| U.S. citizens and permanent residents[a] | | | |
| Hispanic or Latino | 8.7 | 8.4 | 9.1 |
| Not Hispanic or Latino | | | |
| American Indian or Alaska Native | 11.6 | 7.1 | 14.6 |
| Asian | 11.4 | 12.2 | 10.4 |
| Black or African American | 6.3 | 5.8 | 6.7 |
| Native Hawaiian or Other Pacific Islander | 1.9 | 0.0 | 3.8 |
| White | 7.3 | 7.3 | 7.3 |
| More than one race | 3.9 | 3.7 | 4.0 |
| Unknown ethnicity and race | 8.5 | 8.0 | 9.2 |
| Temporary visa holders | 4.6 | 5.0 | 4.5 |
| Number imputed[b] | | | |
| All postdoctoral appointees | 2,986 | 2,049 | 1,423 |
| U.S. citizens and permanent residents[a] | | | |
| Hispanic or Latino | 168 | 81 | 87 |
| Not Hispanic or Latino | | | |
| American Indian or Alaska Native | 8 | 2 | 6 |
| Asian | 671 | 400 | 271 |
| Black or African American | 69 | 25 | 44 |
| Native Hawaiian or Other Pacific Islander | 1 | 0 | 1 |
| White | 1,239 | 653 | 586 |
| More than one race | 20 | 9 | 11 |
| Unknown ethnicity and race | 249 | 129 | 121 |
| Temporary visa holders | 1,691 | 1,185 | 597 |

[a] Ethnicity and race data are available only for U.S. citizens and permanent residents.

[b] This table reports sum of counts imputed in each of these cells and variables. Because some units report totals without complete details, the sum of the imputed details will often be higher than the related total.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering.

TABLE A-12

## Imputation for postdoctoral appointees in science, engineering, and health fields, by mechanism of support, source of support, and sex: 2019

(Number and percent)

| Mechanism of support | All sources | Federal | | | | | | | | Domestic | Foreign | Institutional | Self-support | Unknown | Male | Female |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DOD | DOE | HHS | | NASA | NSF | USDA | Other | | | | | | | |
| | | | | NIH | Other | | | | | | | | | | | |
| Imputation rate (%) | | | | | | | | | | | | | | | | |
| All postdoctoral appointees | 4.5 | 9.2 | 8.3 | 8.0 | 7.0 | 5.6 | 11.2 | 6.7 | 7.7 | 8.7 | 6.3 | 6.8 | 3.5 | 14.7 | 5.2 | 5.3 |
| Fellowships | 26.1 | 34.0 | 25.0 | 30.0 | 11.4 | 14.0 | 30.8 | 37.0 | 20.7 | 17.7 | 13.3 | 17.4 | na | 59.1 | 24.9 | 27.6 |
| Research grant | 8.4 | 7.4 | 8.8 | 6.4 | 6.0 | 6.0 | 10.4 | 7.6 | 9.2 | 6.4 | 3.8 | 7.3 | na | 57.7 | 9.3 | 8.6 |
| Traineeship | 8.8 | 0.0 | 0.0 | 6.1 | 6.8 | 0.0 | 4.3 | 0.0 | 41.7 | 3.4 | 7.9 | 4.5 | na | 69.1 | 12.5 | 8.8 |
| Other support | 7.5 | 7.9 | 2.4 | 10.1 | 35.7 | 0.0 | 7.0 | 0.0 | 7.7 | 14.0 | 2.1 | 5.7 | 3.5 | 8.5 | 7.6 | 7.8 |
| Number imputed[a] | | | | | | | | | | | | | | | | |
| All postdoctoral appointees | 2,986 | 218 | 169 | 1,553 | 61 | 40 | 399 | 54 | 202 | 869 | 101 | 1,066 | 31 | 836 | 2,049 | 1,423 |
| Fellowships | 1,887 | 66 | 24 | 438 | 10 | 8 | 90 | 17 | 58 | 257 | 63 | 331 | na | 525 | 1,013 | 871 |
| Research grant | 3,369 | 155 | 167 | 969 | 42 | 38 | 332 | 50 | 187 | 394 | 27 | 426 | na | 582 | 2,283 | 1,338 |
| Traineeship | 310 | 0 | 0 | 141 | 5 | 0 | 1 | 0 | 40 | 8 | 3 | 27 | na | 85 | 202 | 167 |
| Other support | 1,154 | 6 | 1 | 62 | 5 | 0 | 4 | 0 | 16 | 295 | 8 | 413 | 31 | 313 | 685 | 502 |

na = not applicable; not asked because this support mechanism does not apply.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NIH = National Institutes of Health; NSF = National Science Foundation; USDA = Department of Agriculture.

[a] This table reports the sum of counts imputed in each of these cells and variables. Because some units report totals without complete details, the sum of the imputed details will often be higher than the related total.

**Source(s):**
National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE A-13

## Imputation for postdoctoral appointees in science, engineering, and health fields, by mechanism of support, citizenship, and type of doctoral degree: 2019

(Number and percent)

| Mechanism of support | All doctoral degree types | Doctoral degree | Professional degree | Dual degree | Doctoral degree type unknown |
|---|---|---|---|---|---|
| Imputation rate (%) | | | | | |
| All postdoctoral appointees | 4.5 | 6.5 | 9.2 | 3.1 | 9.7 |
| Fellowships | 26.1 | 17.7 | 30.6 | 8.6 | 50.1 |
| Research grant | 8.4 | 8.8 | 6.6 | 2.8 | 9.8 |
| Traineeship | 8.8 | 8.5 | 13.9 | 8.1 | 8.0 |
| Other support | 7.5 | 7.6 | 3.0 | 6.2 | 11.0 |
| U.S. citizens and permanent residents | 10.3 | 11.1 | 14.0 | 3.3 | 21.6 |
| Foreign nationals with temporary visa | 4.6 | 6.2 | 4.0 | 3.0 | 9.2 |
| Number imputed[a] | | | | | |
| All postdoctoral appointees | 2,986 | 3,276 | 397 | 59 | 963 |
| Fellowships | 1,887 | 819 | 253 | 13 | 802 |
| Research grant | 3,369 | 2,840 | 79 | 33 | 550 |
| Traineeship | 310 | 190 | 83 | 11 | 45 |
| Other support | 1,154 | 843 | 50 | 27 | 236 |
| U.S. citizens and permanent residents | 3,029 | 2,330 | 347 | 26 | 1,103 |
| Foreign nationals with temporary visa | 1,691 | 1,812 | 73 | 34 | 439 |

[a] This table reports the sum of counts imputed in each of these cells and variables. Because some units report totals without complete details, the sum of the imputed details will often be higher than the related total.

**Note(s):**

Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE A-14

## Imputation for postdoctoral appointees in science, engineering, and health, by origin of doctoral degree: 2019

(Number and percent)

| Origin of doctoral degree | Imputation rate (%) | Number imputed |
|---|---|---|
| All postdoctoral appointees | 4.5 | 2,986 |
| United States | 6.2 | 1,471 |
| Foreign country | 5.6 | 1,183 |
| Unknown origin | 11.2 | 2,398 |

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE A-15

## Imputation for doctorate-holding nonfaculty researchers in science, engineering, and health, by type of doctoral degree and sex: 2019

(Number and percent)

| Type of doctoral degree | Total | Male | Female |
|---|---|---|---|
| Imputation rate (%) | | | |
| All nonfaculty researchers | 9.5 | 9.9 | 9.2 |
| Doctoral degree | 10.2 | 10.7 | 9.7 |
| Professional degree | 9.6 | 9.5 | 9.6 |
| Dual degree | 14.6 | 18.1 | 9.8 |
| Doctoral degree type unknown | 9.6 | 8.8 | 10.6 |
| Number imputed[a] | | | |
| All nonfaculty researchers | 2,886 | 1,779 | 1,143 |
| Doctoral degree | 2,241 | 1,453 | 820 |
| Professional degree | 175 | 85 | 88 |
| Dual degree | 67 | 50 | 18 |
| Doctoral degree type unknown | 584 | 290 | 294 |

[a] This table reports the sum of counts imputed in each of these cells and variables. Because some units report totals without complete details, the sum of the imputed details will often be higher than the related total.

**Note(s):**

Doctoral degree includes PhD, ScD, DEng, etc.; professional degree includes MD, DVM, DO, DDS, etc.; dual degree includes both professional and doctoral degrees (MD-PhD, DVM-PhD, etc.).

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE A-16

## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 01.0000 | Agriculture, general | | 501 | Agricultural sciences |
| 01.0103 | Agricultural economics | | 901 | Agricultural economics |
| 01.0308 | Agroecology and sustainable agriculture | | 501 | Agricultural sciences |
| 01.0603 | Ornamental horticulture | | 501 | Agricultural sciences |
| 01.0701 | International agriculture | | 501 | Agricultural sciences |
| 01.0901 | Animal sciences, general | | 501 | Agricultural sciences |
| 01.0902 | Agricultural animal breeding | | 501 | Agricultural sciences |
| 01.0903 | Animal health | | 501 | Agricultural sciences |
| 01.0904 | Animal nutrition | | 501 | Agricultural sciences |
| 01.0905 | Dairy science | | 501 | Agricultural sciences |
| 01.0906 | Livestock management | | 501 | Agricultural sciences |
| 01.0907 | Poultry science | | 501 | Agricultural sciences |
| 01.0999 | Animal sciences, other | | 501 | Agricultural sciences |
| 01.1001 | Food science | | 501 | Agricultural sciences |
| 01.1002 | Food technology and processing | | 501 | Agricultural sciences |
| 01.1099 | Food science and technology, other | | 501 | Agricultural sciences |
| 01.1101 | Plant sciences, general | | 501 | Agricultural sciences |
| 01.1102 | Agronomy and crop science | | 501 | Agricultural sciences |
| 01.1103 | Horticultural science | | 501 | Agricultural sciences |
| 01.1104 | Agricultural and horticultural plant breeding | | 501 | Agricultural sciences |
| 01.1105 | Plant protection and integrated pest management | | 501 | Agricultural sciences |
| 01.1106 | Range science and management | | 501 | Agricultural sciences |
| 01.1199 | Plant sciences, other | | 501 | Agricultural sciences |
| 01.1201 | Soil science and agronomy, general | | 501 | Agricultural sciences |
| 01.1202 | Soil chemistry and physics | | 501 | Agricultural sciences |
| 01.1203 | Soil microbiology | | 501 | Agricultural sciences |
| 01.1299 | Soil sciences, other | | 501 | Agricultural sciences |
| 01.9999 | Agriculture, agriculture operations, and related sciences, other | | 501 | Agricultural sciences |
| 03.0101 | Natural resources/ conservation, general | | 511 | Forestry, natural resources and conservation |
| 03.0103 | Environmental studies | | 510 | Environmental science and studies |
| 03.0104 | Environmental science | | 510 | Environmental science and studies |
| 03.0199 | Natural resources conservation and research, other | | 511 | Forestry, natural resources and conservation |
| 03.0201 | Natural resources management and policy | | 511 | Forestry, natural resources and conservation |
| 03.0204 | Natural resource economics | | 901 | Agricultural economics |
| 03.0205 | Water, wetlands, and marine resources management | | 511 | Forestry, natural resources and conservation |
| 03.0206 | Land use planning and management/ development | | 511 | Forestry, natural resources and conservation |
| 03.0299 | Natural resources management and policy, other | | 511 | Forestry, natural resources and conservation |
| 03.0301 | Fishing and fisheries sciences and management | | 511 | Forestry, natural resources and conservation |
| 03.0501 | Forestry, general | | 511 | Forestry, natural resources and conservation |
| 03.0502 | Forest sciences and biology | | 511 | Forestry, natural resources and conservation |
| 03.0506 | Forest management/ forest resources management | | 511 | Forestry, natural resources and conservation |
| 03.0508 | Urban forestry | | 511 | Forestry, natural resources and conservation |
| 03.0509 | Wood science and wood products/ pulp and paper technology | | 511 | Forestry, natural resources and conservation |
| 03.0510 | Forest resources production and management | | 511 | Forestry, natural resources and conservation |
| 03.0599 | Forestry, other | | 511 | Forestry, natural resources and conservation |
| 03.0601 | Wildlife, fish and wildlands science and management | | 511 | Forestry, natural resources and conservation |
| 03.9999 | Natural resources and conservation, other | | 511 | Forestry, natural resources and conservation |
| 05.0101 | African studies | | 910 | Social sciences, not elsewhere classified |
| 05.0102 | American/ United States studies/ civilization | | 910 | Social sciences, not elsewhere classified |

TABLE A-16

## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 05.0103 | Asian studies/ civilization | | 910 | Social sciences, not elsewhere classified |
| 05.0104 | East Asian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0105 | Russian, Central European, East European and Eurasian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0106 | European studies/ civilization | | 910 | Social sciences, not elsewhere classified |
| 05.0107 | Latin American studies | | 910 | Social sciences, not elsewhere classified |
| 05.0108 | Near and Middle Eastern studies | | 910 | Social sciences, not elsewhere classified |
| 05.0109 | Pacific Area/ Pacific Rim studies | | 910 | Social sciences, not elsewhere classified |
| 05.0110 | Russian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0111 | Scandinavian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0112 | South Asian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0113 | Southeast Asian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0114 | Western European studies | | 910 | Social sciences, not elsewhere classified |
| 05.0115 | Canadian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0116 | Balkans studies | | 910 | Social sciences, not elsewhere classified |
| 05.0117 | Baltic studies | | 910 | Social sciences, not elsewhere classified |
| 05.0118 | Slavic studies | | 910 | Social sciences, not elsewhere classified |
| 05.0119 | Caribbean studies | | 910 | Social sciences, not elsewhere classified |
| 05.0120 | Ural-Altaic and Central Asian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0121 | Commonwealth studies | | 910 | Social sciences, not elsewhere classified |
| 05.0122 | Regional studies (US, Canadian, foreign) | | 910 | Social sciences, not elsewhere classified |
| 05.0123 | Chinese studies | | 910 | Social sciences, not elsewhere classified |
| 05.0124 | French studies | | 910 | Social sciences, not elsewhere classified |
| 05.0125 | German studies | | 910 | Social sciences, not elsewhere classified |
| 05.0126 | Italian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0127 | Japanese studies | | 910 | Social sciences, not elsewhere classified |
| 05.0128 | Korean studies | | 910 | Social sciences, not elsewhere classified |
| 05.0129 | Polish studies | | 910 | Social sciences, not elsewhere classified |
| 05.0130 | Spanish and Iberian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0131 | Tibetan studies | | 910 | Social sciences, not elsewhere classified |
| 05.0132 | Ukraine studies | | 910 | Social sciences, not elsewhere classified |
| 05.0133 | Irish studies | | 910 | Social sciences, not elsewhere classified |
| 05.0134 | Latin American and Caribbean studies | | 910 | Social sciences, not elsewhere classified |
| 05.0199 | Area studies, other | | 910 | Social sciences, not elsewhere classified |
| 05.0200 | Ethnic studies | | 910 | Social sciences, not elsewhere classified |
| 05.0201 | African-American/ Black studies | | 910 | Social sciences, not elsewhere classified |
| 05.0202 | American Indian/ Native American studies | | 910 | Social sciences, not elsewhere classified |
| 05.0203 | Hispanic-American, Puerto Rican, and Mexican-American/ Chicano studies | | 910 | Social sciences, not elsewhere classified |
| 05.0206 | Asian-American studies | | 910 | Social sciences, not elsewhere classified |
| 05.0207 | Women's studies | | 910 | Social sciences, not elsewhere classified |
| 05.0208 | Gay/ lesbian studies | | 910 | Social sciences, not elsewhere classified |
| 05.0209 | Folklore studies | | 910 | Social sciences, not elsewhere classified |
| 05.0210 | Disability studies | | 910 | Social sciences, not elsewhere classified |
| 05.0211 | Deaf studies | | 910 | Social sciences, not elsewhere classified |
| 05.0299 | Ethnic, cultural minority, gender, and group studies, other | | 910 | Social sciences, not elsewhere classified |
| 11.0101 | Computer and information sciences, general | DCS | 411 | Computer and information science, general |
| 11.0102 | Artificial intelligence | DCS | 411 | Computer and information science, general |
| 11.0103 | Information technology | DCS | 411 | Computer and information science, general |
| 11.0104 | Informatics | DCS | 411 | Computer and information science, general |
| 11.0199 | Computer and information sciences, other | DCS | 411 | Computer and information science, general |

TABLE A-16

## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 11.0401 | Information science/ studies | DCS | 412 | Computer and information science, not elsewhere classified |
| 11.0501 | Computer systems analysis/ analyst | DCS | 412 | Computer and information science, not elsewhere classified |
| 11.0701 | Computer science | DCS | 410 | Computer science |
| 11.0802 | Data modeling/ warehousing and database administration | DCS | 412 | Computer and information science, not elsewhere classified |
| 11.0803 | Computer graphics | DCS | 412 | Computer and information science, not elsewhere classified |
| 11.0804 | Modeling, virtual environments and simulation | DCS | 412 | Computer and information science, not elsewhere classified |
| 11.0901 | Computer systems networking and telecommunications | DCS | 412 | Computer and information science, not elsewhere classified |
| 11.1003 | Computer and information systems security/ information assurance | DCS | 412 | Computer and information science, not elsewhere classified |
| 11.9999 | Computer and information sciences and support services, other | DCS | 412 | Computer and information science, not elsewhere classified |
| 14.0101 | Engineering, general | | 114 | Engineering, not elsewhere classified |
| 14.0201 | Aerospace, aeronautical, and astronautical/ space engineering | | 101 | Aerospace, aeronautical, and astronautical engineering |
| 14.0301 | Agricultural engineering | | 102 | Agricultural engineering |
| 14.0401 | Architectural engineering | | 105 | Civil engineering |
| 14.0501 | Bioengineering and biomedical engineering | | 103 | Bioengineering and biomedical engineering |
| 14.0601 | Ceramic sciences and engineering | | 110 | Metallurgical and materials engineering |
| 14.0701 | Chemical engineering | | 104 | Chemical engineering |
| 14.0702 | Chemical and biomolecular engineering | | 104 | Chemical engineering |
| 14.0799 | Chemical engineering, other | | 104 | Chemical engineering |
| 14.0801 | Civil engineering, general | | 105 | Civil engineering |
| 14.0802 | Geotechnical and geoenvironmental engineering | | 105 | Civil engineering |
| 14.0803 | Structural engineering | | 105 | Civil engineering |
| 14.0804 | Transportation and highway engineering | | 105 | Civil engineering |
| 14.0805 | Water resources engineering | | 105 | Civil engineering |
| 14.0899 | Civil engineering, other | | 105 | Civil engineering |
| 14.0901 | Computer engineering, general | | 106 | Electrical, electronics, and communications engineering |
| 14.0902 | Computer hardware engineering | | 106 | Electrical, electronics, and communications engineering |
| 14.0903 | Computer software engineering | | 106 | Electrical, electronics, and communications engineering |
| 14.0999 | Computer engineering, other | | 106 | Electrical, electronics, and communications engineering |
| 14.1001 | Electrical and electronics engineering | | 106 | Electrical, electronics, and communications engineering |
| 14.1003 | Laser and optical engineering | | 106 | Electrical, electronics, and communications engineering |
| 14.1004 | Telecommunications engineering | | 106 | Electrical, electronics, and communications engineering |
| 14.1099 | Electrical, electronics and communications engineering, other | | 106 | Electrical, electronics, and communications engineering |
| 14.1101 | Engineering mechanics | | 107 | Engineering mechanics, physics, and science |
| 14.1201 | Engineering physics/ applied physics | | 107 | Engineering mechanics, physics, and science |

TABLE A-16

## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 14.1301 | Engineering science | | 107 | Engineering mechanics, physics, and science |
| 14.1401 | Environmental/ environmental health engineering | | 105 | Civil engineering |
| 14.1801 | Materials engineering | | 110 | Metallurgical and materials engineering |
| 14.1901 | Mechanical engineering | | 109 | Mechanical engineering |
| 14.2001 | Metallurgical engineering | | 110 | Metallurgical and materials engineering |
| 14.2101 | Mining and mineral engineering | | 111 | Mining and mineral engineering |
| 14.2201 | Naval architecture and marine engineering | | 114 | Engineering, not elsewhere classified |
| 14.2301 | Nuclear engineering | | 112 | Nuclear engineering |
| 14.2401 | Ocean engineering | | 114 | Engineering, not elsewhere classified |
| 14.2501 | Petroleum engineering | | 113 | Petroleum engineering |
| 14.2701 | Systems engineering | | 108 | Industrial and manufacturing engineering |
| 14.2801 | Textile sciences and engineering | | 110 | Metallurgical and materials engineering |
| 14.3201 | Polymer/ plastics engineering | | 104 | Chemical engineering |
| 14.3301 | Construction engineering | | 105 | Civil engineering |
| 14.3401 | Forest engineering | | 114 | Engineering, not elsewhere classified |
| 14.3501 | Industrial engineering | | 108 | Industrial and manufacturing engineering |
| 14.3601 | Manufacturing engineering | | 108 | Industrial and manufacturing engineering |
| 14.3701 | Operations research | | 108 | Industrial and manufacturing engineering |
| 14.3801 | Surveying engineering | | 105 | Civil engineering |
| 14.3901 | Geological/ geophysical engineering | | 111 | Mining and mineral engineering |
| 14.4001 | Paper science and engineering | | 104 | Chemical engineering |
| 14.4101 | Electromechanical engineering | | 109 | Mechanical engineering |
| 14.4201 | Mechatronics, robotics, and automation engineering | | 109 | Mechanical engineering |
| 14.4301 | Biochemical engineering | | 104 | Chemical engineering |
| 14.4401 | Engineering chemistry | | 104 | Chemical engineering |
| 14.4501 | Biological/ biosystems engineering | | 115 | Biological and biosystems engineering |
| 14.9999 | Engineering, other | | 114 | Engineering, not elsewhere classified |
| 15.0401 | Biomedical technology/ technician | Master's, doctoral | 103 | Bioengineering and biomedical engineering |
| 15.1502 | Engineering design | | 114 | Engineering, not elsewhere classified |
| 15.1601 | Nanotechnology | | 116 | Nanotechnology |
| 16.0102 | Linguistics | | 906 | Linguistics |
| 16.0105 | Applied linguistics | | 906 | Linguistics |
| 16.1602 | Linguistics of asl and other sign languages | | 906 | Linguistics |
| 19.0701 | Human development and family studies, general | | 915 | Human development |
| 19.0702 | Adult development and aging | | 915 | Human development |
| 19.0706 | Child development | | 915 | Human development |
| 26.0101 | Biology/ biological sciences, general | | 603 | Biology |
| 26.0102 | Biomedical sciences, general | | 623 | Biomedical sciences |
| 26.0202 | Biochemistry | | 602 | Biochemistry |
| 26.0203 | Biophysics | | 605 | Biophysics |
| 26.0204 | Molecular biology | | 622 | Molecular biology |
| 26.0205 | Molecular biochemistry | | 602 | Biochemistry |
| 26.0206 | Molecular biophysics | | 605 | Biophysics |
| 26.0207 | Structural biology | | 622 | Molecular biology |
| 26.0208 | Photobiology | | 622 | Molecular biology |
| 26.0209 | Radiation biology/ radiobiology | | 622 | Molecular biology |
| 26.0210 | Biochemistry and molecular biology | | 602 | Biochemistry |
| 26.0299 | Biochemistry, biophysics and molecular biology, other | | 602 | Biochemistry |
| 26.0301 | Botany/ plant biology | | 606 | Botany and plant biology |
| 26.0305 | Plant pathology/ phytopathology | | 606 | Botany and plant biology |

TABLE A-16

## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 26.0307 | Plant physiology | | 606 | Botany and plant biology |
| 26.0308 | Plant molecular biology | | 606 | Botany and plant biology |
| 26.0399 | Botany/ plant biology, other | | 606 | Botany and plant biology |
| 26.0401 | Cell/ cellular biology and histology | | 619 | Cell, cellular biology and anatomical sciences |
| 26.0403 | Anatomy | | 619 | Cell, cellular biology and anatomical sciences |
| 26.0404 | Developmental biology and embryology | | 619 | Cell, cellular biology and anatomical sciences |
| 26.0406 | Cell/ cellular and molecular biology | | 619 | Cell, cellular biology and anatomical sciences |
| 26.0407 | Cell biology and anatomy | | 619 | Cell, cellular biology and anatomical sciences |
| 26.0499 | Cell/ cellular biology and anatomical sciences, other | | 619 | Cell, cellular biology and anatomical sciences |
| 26.0502 | Microbiology, general | | 611 | Microbiological sciences and immunology |
| 26.0503 | Medical microbiology and bacteriology | | 611 | Microbiological sciences and immunology |
| 26.0504 | Virology | | 611 | Microbiological sciences and immunology |
| 26.0505 | Parasitology | | 611 | Microbiological sciences and immunology |
| 26.0506 | Mycology | | 611 | Microbiological sciences and immunology |
| 26.0507 | Immunology | | 611 | Microbiological sciences and immunology |
| 26.0508 | Microbiology and immunology | | 611 | Microbiological sciences and immunology |
| 26.0599 | Microbiological sciences and immunology, other | | 611 | Microbiological sciences and immunology |
| 26.0701 | Zoology/ animal biology | | 616 | Zoology and animal biology |
| 26.0702 | Entomology | | 616 | Zoology and animal biology |
| 26.0707 | Animal physiology | | 616 | Zoology and animal biology |
| 26.0708 | Animal behavior and ethology | | 616 | Zoology and animal biology |
| 26.0709 | Wildlife biology | | 616 | Zoology and animal biology |
| 26.0799 | Zoology/ animal biology, other | | 616 | Zoology and animal biology |
| 26.0801 | Genetics, general | | 610 | Genetics |
| 26.0802 | Molecular genetics | | 610 | Genetics |
| 26.0803 | Microbial and eukaryotic genetics | | 610 | Genetics |
| 26.0804 | Animal genetics | | 610 | Genetics |
| 26.0805 | Plant genetics | | 610 | Genetics |
| 26.0806 | Human/ medical genetics | | 610 | Genetics |
| 26.0807 | Genome sciences/ genomics | | 610 | Genetics |
| 26.0899 | Genetics, other | | 610 | Genetics |
| 26.0901 | Physiology, general | | 615 | Physiology |
| 26.0902 | Molecular physiology | | 615 | Physiology |
| 26.0903 | Cell physiology | | 615 | Physiology |
| 26.0904 | Endocrinology | | 615 | Physiology |
| 26.0905 | Reproductive biology | | 615 | Physiology |
| 26.0906 | Neurobiology and neurophysiology | | 615 | Physiology |
| 26.0907 | Cardiovascular science | | 615 | Physiology |
| 26.0908 | Exercise physiology | | 615 | Physiology |
| 26.0909 | Vision science/ physiological optics | | 615 | Physiology |
| 26.0910 | Pathology/ experimental pathology | | 613 | Pathology/experimental pathology |
| 26.0911 | Oncology and cancer biology | | 615 | Physiology |
| 26.0912 | Aerospace physiology and medicine | | 615 | Physiology |
| 26.0999 | Physiology, pathology, and related sciences, other | | 615 | Physiology |
| 26.1001 | Pharmacology | | 614 | Pharmacology and toxicology |

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## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 26.1002 | Molecular pharmacology | | 614 | Pharmacology and toxicology |
| 26.1003 | Neuropharmacology | | 614 | Pharmacology and toxicology |
| 26.1004 | Toxicology | | 614 | Pharmacology and toxicology |
| 26.1005 | Molecular toxicology | | 614 | Pharmacology and toxicology |
| 26.1006 | Environmental toxicology | | 614 | Pharmacology and toxicology |
| 26.1007 | Pharmacology and toxicology | | 614 | Pharmacology and toxicology |
| 26.1099 | Pharmacology and toxicology, other | | 614 | Pharmacology and toxicology |
| 26.1101 | Biometry/ biometrics | | 618 | Biostatistics and bioinformatics |
| 26.1102 | Biostatistics | | 618 | Biostatistics and bioinformatics |
| 26.1103 | Bioinformatics | | 618 | Biostatistics and bioinformatics |
| 26.1104 | Computational biology | | 618 | Biostatistics and bioinformatics |
| 26.1199 | Biomathematics, bioinformatics, and computational biology, other | | 618 | Biostatistics and bioinformatics |
| 26.1201 | Biotechnology | | 624 | Biotechnology |
| 26.1301 | Ecology | | 620 | Ecology and population biology |
| 26.1302 | Marine biology and biological oceanography | | 303 | Ocean and marine sciences |
| 26.1303 | Evolutionary biology | | 620 | Ecology and population biology |
| 26.1304 | Aquatic biology/ limnology | | 620 | Ecology and population biology |
| 26.1305 | Environmental biology | | 620 | Ecology and population biology |
| 26.1306 | Population biology | | 620 | Ecology and population biology |
| 26.1307 | Conservation biology | | 620 | Ecology and population biology |
| 26.1308 | Systematic biology/ biological systematics | | 620 | Ecology and population biology |
| 26.1309 | Epidemiology | | 621 | Epidemiology |
| 26.1310 | Ecology and evolutionary biology | | 620 | Ecology and population biology |
| 26.1399 | Ecology, evolution, systematics and population biology, other | | 620 | Ecology and population biology |
| 26.1401 | Molecular medicine | | 617 | Biological and biomedical sciences, not elsewhere |
| 26.1501 | Neuroscience | | 950 | Neurobiology and neuroscience |
| 26.1502 | Neuroanatomy | | 950 | Neurobiology and neuroscience |
| 26.1503 | Neurobiology and anatomy | | 950 | Neurobiology and neuroscience |
| 26.1504 | Neurobiology and behavior | | 950 | Neurobiology and neuroscience |
| 26.1599 | Neurobiology and neurosciences, other | | 950 | Neurobiology and neuroscience |
| 26.9999 | Biological and biomedical sciences, other | | 617 | Biological and biomedical sciences, not elsewhere classified |
| 27.0101 | Mathematics, general | | 402 | Mathematics and applied mathematics |
| 27.0102 | Algebra and number theory | | 402 | Mathematics and applied mathematics |
| 27.0103 | Analysis and functional analysis | | 402 | Mathematics and applied mathematics |
| 27.0104 | Geometry/ geometric analysis | | 402 | Mathematics and applied mathematics |
| 27.0105 | Topology and foundations | | 402 | Mathematics and applied mathematics |
| 27.0199 | Mathematics, other | | 402 | Mathematics and applied mathematics |
| 27.0301 | Applied mathematics, general | | 402 | Mathematics and applied mathematics |
| 27.0303 | Computational mathematics | | 402 | Mathematics and applied mathematics |
| 27.0304 | Computational and applied mathematics | | 402 | Mathematics and applied mathematics |
| 27.0305 | Financial mathematics | | 402 | Mathematics and applied mathematics |
| 27.0306 | Mathematical biology | | 402 | Mathematics and applied mathematics |
| 27.0399 | Applied mathematics, other | | 402 | Mathematics and applied mathematics |
| 27.0501 | Statistics, general | | 403 | Statistics |
| 27.0502 | Mathematical statistics and probability | | 403 | Statistics |
| 27.0503 | Mathematics and statistics | | 403 | Statistics |
| 27.0599 | Statistics, other | | 403 | Statistics |

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## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 27.9999 | Mathematics and statistics, other | | 403 | Statistics |
| 30.0101 | Biological and physical sciences | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.0501 | Peace studies and conflict resolution | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.0601 | Systems science and theory | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.0801 | Mathematics and computer science (combined program) | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.1001 | Biopsychology | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.1101 | Gerontology | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.1501 | Science, technology and society | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.1601 | Accounting and computer science (combined program) | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.1701 | Behavioral sciences | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.1801 | Natural sciences | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.1901 | Nutrition sciences | | 612 | Nutrition science |
| 30.2001 | International/ global studies | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.2101 | Holocaust and related studies | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.2301 | Intercultural/ multicultural and diversity studies | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.2501 | Cognitive science | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.2701 | Human biology | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.3001 | Computational science | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.3101 | Human computer interaction | | 980 | Multidisciplinary and interdisciplinary studies |
| 30.3201 | Marine sciences | | 303 | Ocean and marine sciences |
| 31.0505 | Kinesiology and exercise science | | 722 | Health-related, not elsewhere classified |
| 40.0101 | Physical sciences | | 204 | Physical sciences, not elsewhere classified |
| 40.0201 | Astronomy | | 201 | Astronomy and astrophysics |
| 40.0202 | Astrophysics | | 201 | Astronomy and astrophysics |
| 40.0203 | Planetary astronomy and science | | 201 | Astronomy and astrophysics |
| 40.0299 | Astronomy and astrophysics, other | | 201 | Astronomy and astrophysics |
| 40.0401 | Atmospheric sciences and meteorology, general | | 301 | Atmospheric sciences and meteorology |
| 40.0402 | Atmospheric chemistry and climatology | | 301 | Atmospheric sciences and meteorology |
| 40.0403 | Atmospheric physics and dynamics | | 301 | Atmospheric sciences and meteorology |
| 40.0404 | Meteorology | | 301 | Atmospheric sciences and meteorology |
| 40.0499 | Atmospheric sciences and meteorology, other | | 301 | Atmospheric sciences and meteorology |
| 40.0501 | Chemistry, general | | 202 | Chemistry |
| 40.0502 | Analytical chemistry | | 202 | Chemistry |
| 40.0503 | Inorganic chemistry | | 202 | Chemistry |
| 40.0504 | Organic chemistry | | 202 | Chemistry |
| 40.0506 | Physical chemistry | | 202 | Chemistry |

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## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 40.0507 | Polymer chemistry | | 202 | Chemistry |
| 40.0508 | Chemical physics | | 202 | Chemistry |
| 40.0509 | Environmental chemistry | | 202 | Chemistry |
| 40.0510 | Forensic chemistry | | 202 | Chemistry |
| 40.0511 | Theoretical chemistry | | 202 | Chemistry |
| 40.0599 | Chemistry, other | | 202 | Chemistry |
| 40.0601 | Geology/ earth science, general | | 302 | Geological and earth sciences |
| 40.0602 | Geochemistry | | 302 | Geological and earth sciences |
| 40.0603 | Geophysics and seismology | | 302 | Geological and earth sciences |
| 40.0604 | Paleontology | | 302 | Geological and earth sciences |
| 40.0605 | Hydrology and water resources science | | 302 | Geological and earth sciences |
| 40.0606 | Geochemistry and petrology | | 302 | Geological and earth sciences |
| 40.0607 | Oceanography, chemical and physical | | 303 | Ocean and marine sciences |
| 40.0699 | Geological and earth sciences/ geosciences, other | | 302 | Geological and earth sciences |
| 40.0801 | Physics, general | | 203 | Physics |
| 40.0802 | Atomic/ molecular physics | | 203 | Physics |
| 40.0804 | Elementary particle physics | | 203 | Physics |
| 40.0805 | Plasma and high-temperature physics | | 203 | Physics |
| 40.0806 | Nuclear physics | | 203 | Physics |
| 40.0807 | Optics/ optical sciences | | 203 | Physics |
| 40.0808 | Condensed matter and materials physics | | 203 | Physics |
| 40.0809 | Acoustics | | 203 | Physics |
| 40.0810 | Theoretical and mathematical physics | | 203 | Physics |
| 40.0899 | Physics, other | | 203 | Physics |
| 40.1001 | Materials science | | 205 | Materials sciences |
| 40.1002 | Materials chemistry | | 205 | Materials sciences |
| 40.1099 | Materials sciences, other | | 205 | Materials sciences |
| 40.9999 | Physical sciences, other | | 204 | Physical sciences, not elsewhere classified |
| 42.0101 | Psychology, general | PsyD | 801 | Psychology, general |
| 42.2701 | Cognitive psychology and psycholinguistics | PsyD | 805 | Research and experimental psychology |
| 42.2702 | Comparative psychology | PsyD | 805 | Research and experimental psychology |
| 42.2703 | Developmental and child psychology | PsyD | 805 | Research and experimental psychology |
| 42.2704 | Experimental psychology | PsyD | 805 | Research and experimental psychology |
| 42.2705 | Personality psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2706 | Physiological psychology/ psychobiology | PsyD | 805 | Research and experimental psychology |
| 42.2707 | Social psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2708 | Psychometrics and quantitative psychology | PsyD | 805 | Research and experimental psychology |
| 42.2709 | Psychopharmacology | PsyD | 805 | Research and experimental psychology |
| 42.2799 | Research and experimental psychology, other | PsyD | 805 | Research and experimental psychology |
| 42.2801 | Clinical psychology | PsyD | 803 | Clinical psychology |
| 42.2802 | Community psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2803 | Counseling psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2804 | Industrial and organizational psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2805 | School psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2806 | Educational psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2807 | Clinical child psychology | PsyD | 803 | Clinical psychology |
| 42.2808 | Environmental psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2809 | Geropsychology | PsyD | 804 | Counseling and applied psychology |
| 42.2810 | Health/ medical psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2811 | Family psychology | PsyD | 804 | Counseling and applied psychology |

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## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 42.2812 | Forensic psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2813 | Applied psychology | PsyD | 804 | Counseling and applied psychology |
| 42.2814 | Applied behavior analysis | PsyD | 804 | Counseling and applied psychology |
| 42.2899 | Clinical, counseling and applied psychology, other | PsyD | 804 | Counseling and applied psychology |
| 42.9999 | Psychology, other | PsyD | 804 | Counseling and applied psychology |
| 43.0104 | Criminal justice/ safety studies | | 911 | Criminal justice - safety studies |
| 44.0501 | Public policy analysis, general | | 914 | Public policy analysis |
| 44.0502 | Education policy analysis | | 914 | Public policy analysis |
| 44.0503 | Health policy analysis | | 914 | Public policy analysis |
| 44.0504 | International policy analysis | | 914 | Public policy analysis |
| 44.0599 | Public policy analysis, other | | 914 | Public policy analysis |
| 45.0101 | Social sciences, general | | 910 | Social sciences, not elsewhere classified |
| 45.0102 | Research methodology and quantitative methods | | 910 | Social sciences, not elsewhere classified |
| 45.0201 | Anthropology | | 902 | Anthropology |
| 45.0202 | Physical and biological anthropology | | 902 | Anthropology |
| 45.0203 | Medical anthropology | | 902 | Anthropology |
| 45.0204 | Cultural anthropology | | 902 | Anthropology |
| 45.0299 | Anthropology, other | | 902 | Anthropology |
| 45.0301 | Archeology | | 910 | Social sciences, not elsewhere classified |
| 45.0401 | Criminology | | 910 | Social sciences, not elsewhere classified |
| 45.0501 | Demography and population studies | | 908 | Sociology |
| 45.0601 | Economics, general | | 903 | Economics |
| 45.0602 | Applied economics | | 903 | Economics |
| 45.0603 | Econometrics and quantitative economics | | 903 | Economics |
| 45.0604 | Development economics and international development | | 903 | Economics |
| 45.0605 | International economics | | 903 | Economics |
| 45.0699 | Economics, other | | 903 | Economics |
| 45.0701 | Geography | | 904 | Geography and cartography |
| 45.0702 | Geographic information science and cartography | | 904 | Geography and cartography |
| 45.0799 | Geography, other | | 904 | Geography and cartography |
| 45.0901 | International relations and affairs | | 912 | International relations and national security studies |
| 45.0902 | National security policy studies | | 912 | International relations and national security studies |
| 45.0999 | International relations and national security studies, other | | 912 | International relations and national security studies |
| 45.1001 | Political science and government, general | | 907 | Political science and government |
| 45.1002 | American government and politics (United States) | | 907 | Political science and government |
| 45.1003 | Canadian government and politics | | 907 | Political science and government |
| 45.1004 | Political economy | | 907 | Political science and government |
| 45.1099 | Political science and government, other | | 907 | Political science and government |
| 45.1101 | Sociology | | 908 | Sociology |
| 45.1201 | Urban studies/ affairs | | 910 | Social sciences, not elsewhere classified |
| 45.1301 | Sociology and anthropology | | 908 | Sociology |
| 45.1401 | Rural sociology | | 908 | Sociology |
| 45.9999 | Social sciences, other | | 910 | Social sciences, not elsewhere classified |
| 51.0000 | Health services/ allied health/ health sciences, general | DPT, DScPT, OTD | 722 | Health-related, not elsewhere classified |
| 51.0201 | Communication sciences and disorders, general | AuD, SLPD | 723 | Communication disorders sciences |
| 51.0202 | Audiology/ audiologist | AuD, SLPD | 723 | Communication disorders sciences |
| 51.0203 | Speech-language pathology/ pathologist | AuD, SLPD | 723 | Communication disorders sciences |

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## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 51.0204 | Audiology/ audiologist and speech-language pathology/ pathologist | AuD, SLPD | 723 | Communication disorders sciences |
| 51.0299 | Communication disorders sciences and services, other | AuD, SLPD | 723 | Communication disorders sciences |
| 51.0401 | Dentistry | Master's, doctoral, DDS | 718 | Dental sciences |
| 51.0501 | Dental clinical sciences, general | DDS | 718 | Dental sciences |
| 51.0502 | Advanced general dentistry | Master's, doctoral, DDS | 718 | Dental sciences |
| 51.0503 | Oral biology and oral and maxillofacial pathology | DDS | 718 | Dental sciences |
| 51.0504 | Dental public health and education | DDS | 718 | Dental sciences |
| 51.0505 | Dental materials | DDS | 718 | Dental sciences |
| 51.0506 | Endodontics/ endodontology | DDS | 718 | Dental sciences |
| 51.0507 | Oral/ maxillofacial surgery | DDS | 718 | Dental sciences |
| 51.0508 | Orthodontics/ orthodontology | DDS | 718 | Dental sciences |
| 51.0509 | Pediatric dentistry/ pedodontics | DDS | 718 | Dental sciences |
| 51.0510 | Periodontics/ periodontology | DDS | 718 | Dental sciences |
| 51.0511 | Prosthodontics/ prosthodontology | DDS | 718 | Dental sciences |
| 51.0599 | Advanced/ graduate dentistry and oral sciences, other | DDS | 718 | Dental sciences |
| 51.1099 | Clinical/ medical laboratory science and allied professions, other | Master’s, DN, DO, DPM, MD, OD | 717 | Clinical medicine, not elsewhere classified |
| 51.1201 | Medicine | Master’s, DN, DO, DPM, MD, OD, doctoral | var | Must be reported using gss code. |
| 51.1401 | Medical scientist | DN, DO, DPM, MD, OD | 717 | Clinical medicine, not elsewhere classified |
| 51.2001 | Pharmacy | Master’s, PharmD, doctoral | 720 | Pharmaceutical sciences |
| 51.2002 | Pharmacy administration and pharmacy policy and regulatory affairs | Master’s, PharmD | 720 | Pharmaceutical sciences |
| 51.2003 | Pharmaceutics and drug design | PharmD | 720 | Pharmaceutical sciences |
| 51.2004 | Medicinal and pharmaceutical chemistry | PharmD | 720 | Pharmaceutical sciences |
| 51.2005 | Natural products chemistry and pharmacognosy | PharmD | 720 | Pharmaceutical sciences |
| 51.2006 | Clinical and industrial drug development | PharmD | 720 | Pharmaceutical sciences |
| 51.2007 | Pharmacoeconomics/ pharmaceutical economics | PharmD | 720 | Pharmaceutical sciences |
| 51.2009 | Industrial and physical pharmacy and cosmetic sciences | PharmD | 720 | Pharmaceutical sciences |
| 51.2010 | Pharmaceutical sciences | PharmD | 720 | Pharmaceutical sciences |
| 51.2099 | Pharmacy, pharmaceutical sciences, and administration, other | Master’s, PharmD | 720 | Pharmaceutical sciences |
| 51.2201 | Public health, general | | 712 | Public health |
| 51.2202 | Environmental health | | 712 | Public health |
| 51.2205 | Health/ medical physics | | 712 | Public health |
| 51.2206 | Occupational health and industrial hygiene | | 712 | Public health |
| 51.2207 | Public health education and promotion | | 712 | Public health |
| 51.2208 | Community health and preventive medicine | | 712 | Public health |
| 51.2209 | Maternal and child health | | 712 | Public health |
| 51.2210 | International public health/ international health | | 712 | Public health |
| 51.2299 | Public health, other | | 712 | Public health |
| 51.2306 | Occupational therapy/ therapist | Master’s, OTD | 722 | Health-related, not elsewhere classified |
| 51.2308 | Physical therapy/ therapist | Master’s, DPT, DScPT | 722 | Health-related, not elsewhere classified |
| 51.2314 | Rehabilitation science | DPT, DScPT, OTD | 722 | Health-related, not elsewhere classified |
| 51.2401 | Veterinary medicine | Master's, doctoral, DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2501 | Veterinary sciences/ veterinary clinical sciences, general | DVM | 721 | Veterinary biomedical and clinical sciences |

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## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 51.2502 | Veterinary anatomy | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2503 | Veterinary physiology | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2504 | Veterinary microbiology and immunobiology | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2505 | Veterinary pathology and pathobiology | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2506 | Veterinary toxicology and pharmacology | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2507 | Large animal/ food animal and equine surgery and medicine | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2508 | Small/ companion animal surgery and medicine | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2509 | Comparative and laboratory animal medicine | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2510 | Veterinary preventive medicine, epidemiology, and public health | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2511 | Veterinary infectious diseases | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2599 | Veterinary biomedical and clinical sciences, other | DVM | 721 | Veterinary biomedical and clinical sciences |
| 51.2706 | Medical informatics | | 722 | Health-related, not elsewhere classified |
| 51.3201 | Bioethics/ medical ethics | | 722 | Health-related, not elsewhere classified |
| 51.3801 | Registered nursing/ registered nurse | Master's, ND, DNP | 719 | Nursing |
| 51.3802 | Nursing administration | Master's, ND, DNP | 719 | Nursing |
| 51.3804 | Nurse anesthetist | Master's, ND, DNP | 719 | Nursing |
| 51.3808 | Nursing science | ND, DNP | 719 | Nursing science |
| 51.3899 | Registered nursing, nursing administration, nursing research and clinical nursing, other | Master's, ND, DNP | 719 | Nursing |
| 51.9999 | Health professions and related clinical sciences, other | Master's | 722 | Health-related, not elsewhere classified |
| 54.0104 | History and philosophy of science and technology | | 905 | History and philosophy of science and technology |
| 60.0101 | Oral and maxillofacial surgery | | 718 | Dental sciences |
| 60.0102 | Dental public health | | 718 | Dental sciences |
| 60.0103 | Endodontics | | 718 | Dental sciences |
| 60.0104 | Oral and maxillofacial pathology | | 718 | Dental sciences |
| 60.0105 | Orthodontics | | 718 | Dental sciences |
| 60.0106 | Pediatric dentistry | | 718 | Dental sciences |
| 60.0107 | Periodontology | | 718 | Dental sciences |
| 60.0108 | Prosthodontics | | 718 | Dental sciences |
| 60.0109 | Oral and maxillofacial radiology | | 718 | Dental sciences |
| 60.0199 | Dental, other | | 718 | Dental sciences |
| 60.0301 | Veterinary anesthesiology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0302 | Veterinary dentistry | | 721 | Veterinary biomedical and clinical sciences |
| 60.0303 | Veterinary dermatology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0304 | Veterinary emergency and critical care medicine | | 721 | Veterinary biomedical and clinical sciences |
| 60.0305 | Veterinary internal medicine | | 721 | Veterinary biomedical and clinical sciences |
| 60.0306 | Laboratory animal medicine | | 721 | Veterinary biomedical and clinical sciences |
| 60.0307 | Veterinary microbiology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0308 | Veterinary nutrition | | 721 | Veterinary biomedical and clinical sciences |
| 60.0309 | Veterinary ophthalmology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0310 | Veterinary pathology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0311 | Veterinary practice | | 721 | Veterinary biomedical and clinical sciences |
| 60.0312 | Veterinary preventive medicine | | 721 | Veterinary biomedical and clinical sciences |
| 60.0313 | Veterinary radiology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0314 | Veterinary surgery | | 721 | Veterinary biomedical and clinical sciences |
| 60.0315 | Theriogenology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0316 | Veterinary toxicology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0317 | Zoological medicine | | 721 | Veterinary biomedical and clinical sciences |

TABLE A-16

## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 60.0318 | Poultry veterinarian | | 721 | Veterinary biomedical and clinical sciences |
| 60.0319 | Veterinary behaviorist | | 721 | Veterinary biomedical and clinical sciences |
| 60.0320 | Veterinary clinical pharmacology | | 721 | Veterinary biomedical and clinical sciences |
| 60.0399 | Veterinary residency programs, other | | 721 | Veterinary biomedical and clinical sciences |
| 60.0401 | Aerospace medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0402 | Allergy and immunology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0403 | Anesthesiology | | 701 | Anesthesiology |
| 60.0404 | Child neurology | | 707 | Neurology and neurosurgery |
| 60.0405 | Clinical biochemical genetics | | 717 | Clinical medicine, not elsewhere classified |
| 60.0406 | Clinical cytogenetics | | 717 | Clinical medicine, not elsewhere classified |
| 60.0407 | Clinical genetics | | 717 | Clinical medicine, not elsewhere classified |
| 60.0408 | Clinical molecular genetics | | 717 | Clinical medicine, not elsewhere classified |
| 60.0409 | Colon and rectal surgery | | 716 | Surgery |
| 60.0410 | Dermatology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0411 | Diagnostic radiology | | 715 | Radiological sciences |
| 60.0412 | Emergency medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0413 | Family medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0414 | General surgery | | 716 | Surgery |
| 60.0415 | Internal medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0416 | Neurological surgery | | 707 | Neurology and neurosurgery |
| 60.0417 | Neurology | | 707 | Neurology and neurosurgery |
| 60.0418 | Nuclear medicine | | 715 | Radiological sciences |
| 60.0419 | Obstetrics and gynecology | | 708 | Obstetrics and gynecology |
| 60.0420 | Occupational medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0421 | Ophthalmology | | 709 | Ophthalmology |
| 60.0422 | Orthopedic surgery | | 716 | Surgery |
| 60.0423 | Otolaryngology | | 710 | Otorhinolaryngology |
| 60.0424 | Pathology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0425 | Pediatrics | | 711 | Pediatrics |
| 60.0426 | Physical medicine and rehabilitation | | 717 | Clinical medicine, not elsewhere classified |
| 60.0427 | Plastic surgery | | 716 | Surgery |
| 60.0428 | Psychiatry | | 713 | Psychiatry |
| 60.0429 | Public health and general preventive medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0430 | Radiation oncology | | 715 | Radiological sciences |
| 60.0431 | Radiologic physics | | 715 | Radiological sciences |
| 60.0432 | Thoracic surgery | | 716 | Surgery |
| 60.0433 | Urology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0434 | Vascular surgery | | 716 | Surgery |
| 60.0499 | Medicals - general certificates, other | | 717 | Clinical medicine, not elsewhere classified |
| 60.0501 | Addiction psychiatry | | 713 | Psychiatry |
| 60.0502 | Adolescent medicine | | 711 | Pediatrics |
| 60.0503 | Blood banking/ transfusion medicine | | 706 | Hematology |
| 60.0504 | Cardiovascular disease | | 702 | Cardiology and cardiovascular disease |
| 60.0505 | Chemical pathology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0506 | Child abuse pediatrics | | 711 | Pediatrics |
| 60.0507 | Child and adolescent psychiatry | | 713 | Psychiatry |
| 60.0508 | Clinical cardiac electrophysiology | | 702 | Cardiology and cardiovascular disease |
| 60.0509 | Clinical neurophysiology | | 707 | Neurology and neurosurgery |
| 60.0510 | Congenital cardiac surgery | | 702 | Cardiology and cardiovascular disease |
| 60.0511 | Critical care medicine | | 717 | Clinical medicine, not elsewhere classified |

TABLE A-16

## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 60.0512 | Cytopathology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0513 | Dermatopathology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0514 | Developmental-behavioral pediatrics | | 711 | Pediatrics |
| 60.0515 | Diagnostic radiologic physics | | 715 | Radiological sciences |
| 60.0516 | Endocrinology, diabetes and metabolism | | 704 | Endocrinology, diabetes, and metabolism |
| 60.0517 | Forensic pathology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0518 | Forensic psychiatry | | 713 | Psychiatry |
| 60.0519 | Gastroenterology | | 705 | Gastroenterology |
| 60.0520 | Geriatric medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0521 | Geriatric psychiatry | | 713 | Psychiatry |
| 60.0522 | Gynecologic oncology | | 703 | Oncology and cancer research |
| 60.0523 | Hematological pathology | | 706 | Hematology |
| 60.0524 | Hematology | | 706 | Hematology |
| 60.0525 | Hospice and palliative medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0526 | Immunopathology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0527 | Infectious disease | | 717 | Clinical medicine, not elsewhere classified |
| 60.0528 | Interventional cardiology | | 702 | Cardiology and cardiovascular disease |
| 60.0529 | Laboratory medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0530 | Maternal and fetal medicine | | 708 | Obstetrics and gynecology |
| 60.0531 | Medical biochemical genetics | | 717 | Clinical medicine, not elsewhere classified |
| 60.0532 | Medical microbiology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0533 | Medical nuclear physics | | 715 | Radiological sciences |
| 60.0534 | Medical oncology | | 703 | Oncology and cancer research |
| 60.0535 | Medical toxicology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0536 | Molecular genetic pathology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0537 | Musculoskeletal oncology | | 703 | Oncology and cancer research |
| 60.0538 | Neonatal-perinatal medicine | | 708 | Obstetrics and gynecology |
| 60.0539 | Nephrology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0540 | Neurodevelopmental disabilities | | 707 | Neurology and neurosurgery |
| 60.0541 | Neuromuscular medicine | | 707 | Neurology and neurosurgery |
| 60.0542 | Neuropathology | | 707 | Neurology and neurosurgery |
| 60.0543 | Neuroradiology | | 715 | Radiological sciences |
| 60.0544 | Neurotology | | 707 | Neurology and neurosurgery |
| 60.0545 | Nuclear radiology | | 715 | Radiological sciences |
| 60.0546 | Orthopedic sports medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0547 | Orthopedic surgery of the spine | | 716 | Surgery |
| 60.0548 | Pain medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0549 | Pediatric cardiology | | 702 | Cardiology and cardiovascular disease |
| 60.0550 | Pediatric critical care medicine | | 711 | Pediatrics |
| 60.0551 | Pediatric dermatology | | 711 | Pediatrics |
| 60.0552 | Pediatric emergency medicine | | 711 | Pediatrics |
| 60.0553 | Pediatric endocrinology | | 704 | Endocrinology, diabetes, and metabolism |
| 60.0554 | Pediatric gastroenterology | | 705 | Gastroenterology |
| 60.0555 | Pediatric hematology-oncology | | 706 | Hematology |
| 60.0556 | Pediatric infectious diseases | | 711 | Pediatrics |
| 60.0557 | Pediatric nephrology | | 711 | Pediatrics |
| 60.0558 | Pediatric orthopedics | | 711 | Pediatrics |
| 60.0559 | Pediatric otolaryngology | | 710 | Otorhinolaryngology |
| 60.0560 | Pediatric pathology | | 711 | Pediatrics |
| 60.0561 | Pediatric pulmonology | | 711 | Pediatrics |

TABLE A-16

## Crosswalk between 2010 Classification of Instructional Program (CIP) codes and 2019 GSS Codes

(Crosswalk)

| CIP code | CIP program title | Degree exclusions | GSS code | GSS field name |
|---|---|---|---|---|
| 60.0562 | Pediatric radiology | | 715 | Radiological sciences |
| 60.0563 | Pediatric rehabilitation medicine | | 711 | Pediatrics |
| 60.0564 | Pediatric rheumatology | | 711 | Pediatrics |
| 60.0565 | Pediatric surgery | | 716 | Surgery |
| 60.0566 | Pediatric transplant hepatology | | 705 | Gastroenterology |
| 60.0567 | Pediatric urology | | 711 | Pediatrics |
| 60.0568 | Physical medicine and rehabilitation/ psychiatry | | 717 | Clinical medicine, not elsewhere classified |
| 60.0569 | Plastic surgery within the head and neck | | 716 | Surgery |
| 60.0570 | Psychosomatic medicine | | 713 | Psychiatry |
| 60.0571 | Pulmonary disease | | 714 | Pulmonary disease |
| 60.0572 | Radioisotopic pathology | | 715 | Radiological sciences |
| 60.0573 | Reproductive endocrinology/ infertility | | 708 | Obstetrics and gynecology |
| 60.0574 | Rheumatology | | 717 | Clinical medicine, not elsewhere classified |
| 60.0575 | Sleep medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0576 | Spinal cord injury medicine | | 707 | Neurology and neurosurgery |
| 60.0577 | Sports medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0578 | Surgery of the hand | | 716 | Surgery |
| 60.0579 | Surgical critical care | | 716 | Surgery |
| 60.0580 | Therapeutic radiologic physics | | 715 | Radiological sciences |
| 60.0581 | Transplant hepatology | | 705 | Gastroenterology |
| 60.0582 | Undersea and hyperbaric medicine | | 717 | Clinical medicine, not elsewhere classified |
| 60.0583 | Vascular and interventional radiology | | 715 | Radiological sciences |
| 60.0584 | Vascular neurology | | 707 | Neurology and neurosurgery |
| 60.0599 | Medicals - subspecialty certificates, other | | 717 | Clinical medicine, not elsewhere classified |
| 60.0601 | Podiatric medicine and surgery | | 717 | Clinical medicine, not elsewhere classified |
| 60.0602 | Podiatric medicine and surgery | | 717 | Clinical medicine, not elsewhere classified |

AuD = Doctor of Audiology; DArch = Doctor of Architecture; DCS = Doctor of Computer Science; DDS = Doctor of Dental Surgery; DED = Doctor of Education; DN = Doctor of Naprapathy; DNP = Doctor of Nursing Practice; DO = Doctor of Osteopathic Medicine; DPM = Doctor of Podiatric Medicine; DPT = Doctor of Physical Therapy; DScPT = Doctor of Science in Physical Therapy; DVM = Doctor of Veterinary Medicine; GSS = Survey of Graduate Students and Postdoctorates in Science and Engineering; JD = Juris Doctor; MArch = Master of Architecture; MD = Doctor of Medicine; MLA = Master of Landscape Architecture; ND = Doctor of Naturopathic Medicine; NFR = nonfaculty researcher; OD = Doctor of Optometry; OTD = Doctor of Occupational Therapy; PharmD = Doctor of Pharmacy; PsyD = Doctor of Psychology; SLPD = Doctor or Speech-Language Pathology; SLPD = Doctor or Speech-Language Pathology.

**Note(s):**

Certificate programs or units are not included if they only award professional degrees, such as AuD, DArch, DCS, DDS, DED, DN, DNP, DO, DPM, DPT, DScPT, DVM, JD, MArch, MD, MLA, ND, OD, OTD, PharmD, PsyD, or SLPD. CIP codes 60.XXXX are designated for medical residency programs. For GSS, these CIP medical residency program titles have been modified to allow reporting of eligible postdoctoral appointees (postdocs) and other doctorate-holding NFRs in these medical fields.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

TABLE A-17

## Mapping of 2019 GSS Codes and Fields

(Crosswalk)

| Broad field | Detailed field | GSS code | GSS field name |
|---|---|---|---|
| Agricultural sciences | Agricultural sciences | 501 | Agricultural sciences |
| Biological and biomedical sciences | Biochemistry | 602 | Biochemistry |
| | Biology | 603 | Biology |
| | Biomedical sciences | 623 | Biomedical sciences |
| | Biophysics | 605 | Biophysics |
| | Biostatistics and bioinformatics | 618 | Biostatistics and bioinformatics |
| | Botany and plant biology | 606 | Botany and plant biology |
| | Biotechnology | 624 | Biotechnology |
| | Cell, cellular biology, and anatomical sciences | 619 | Cell, cellular biology, and anatomical sciences |
| | Ecology and population biology | 620 | Ecology and population biology |
| | Epidemiology | 621 | Epidemiology |
| | Genetics | 610 | Genetics |
| | Microbiological sciences and immunology | 611 | Microbiological sciences and immunology |
| | Molecular biology | 622 | Molecular biology |
| | Neurobiology and neuroscience | 950 | Neurobiology and neuroscience |
| | Nutrition science | 612 | Nutrition science |
| | Pathology and experimental pathology | 613 | Pathology and experimental pathology |
| | Pharmacology and toxicology | 614 | Pharmacology and toxicology |
| | Physiology | 615 | Physiology |
| | Zoology and animal biology | 616 | Zoology and animal biology |
| | Biological and biomedical sciences nec | 617 | Biological and biomedical sciences, not elsewhere classified |
| Computer and information sciences | Computer science | 410 | Computer science |
| | Computer and information science, general | 411 | Computer and information science, general |
| | Computer and information science nec | 412 | Computer and information science, not elsewhere classified |
| Geoscience, atmospheric, and ocean sciences | Atmospheric sciences and meteorology | 301 | Atmospheric sciences and meteorology |
| | Geological and earth sciences | 302 | Geological and earth sciences |
| | Ocean and marine sciences | 303 | Ocean and marine sciences |
| | Geoscience, atmospheric, and ocean sciences nec | 304 | Geoscience, atmospheric, and ocean sciences, not elsewhere classified (postdocs and NFRs only) |
| Mathematics and statistics | Mathematics and applied mathematics | 402 | Mathematics and applied mathematics |
| | Statistics | 403 | Statistics |
| Multidisciplinary and interdisciplinary studies | Multidisciplinary and interdisciplinary studies | 980 | Multidisciplinary and interdisciplinary studies |
| Natural resources and conservation | Environmental science and studies | 510 | Environmental science and studies |
| | Forestry, natural resources and conservation | 511 | Forestry, natural resources and conservation |
| Physical sciences | Astronomy and astrophysics | 201 | Astronomy and astrophysics |
| | Chemistry | 202 | Chemistry |
| | Materials sciences | 205 | Materials sciences |
| | Physics | 203 | Physics |
| | Physical sciences nec | 204 | Physical sciences, not elsewhere classified |
| Psychology | Clinical psychology | 803 | Clinical psychology |
| | Counseling and applied psychology | 804 | Counseling and applied psychology |
| | Psychology, general | 801 | Psychology, general |
| | Research and experimental psychology | 805 | Research and experimental psychology |
| Social sciences | Agricultural economics | 901 | Agricultural economics |
| | Anthropology | 902 | Anthropology |
| | Criminal justice and safety studies | 911 | Criminal justice and safety studies |

TABLE A-17

## Mapping of 2019 GSS Codes and Fields

(Crosswalk)

| Broad field | Detailed field | GSS code | GSS field name |
|---|---|---|---|
| | Economics (except agricultural) | 903 | Economics (except agricultural) |
| | Geography and cartography | 904 | Geography and cartography |
| | History and philosophy of science | 905 | History and philosophy of science |
| | Human development | 915 | Human development |
| | International relations and national security studies | 912 | International relations and national security studies |
| | Linguistics | 906 | Linguistics |
| | Political science and government | 907 | Political science and government |
| | Public policy analysis | 914 | Public policy analysis |
| | Sociology | 908 | Sociology |
| | Social sciences nec | 910 | Social sciences, not elsewhere classified |
| Engineering | Aerospace, aeronautical, and astronautical engineering | 101 | Aerospace, aeronautical, and astronautical engineering |
| | Agricultural engineering | 102 | Agricultural engineering |
| | Bioengineering and biomedical engineering | 103 | Bioengineering and biomedical engineering |
| | Biological and biosystems engineering | 115 | Biological and biosystems engineering |
| | Chemical engineering | 104 | Chemical engineering |
| | Civil engineering | 105 | Civil engineering |
| | Electrical, electronics, and communications engineering | 106 | Electrical, electronics, and communications engineering |
| | Engineering mechanics, physics, and science | 107 | Engineering mechanics, physics, and science |
| | Industrial and manufacturing engineering | 108 | Industrial and manufacturing engineering |
| | Mechanical engineering | 109 | Mechanical engineering |
| | Metallurgical and materials engineering | 110 | Metallurgical and materials engineering |
| | Mining engineering | 111 | Mining engineering |
| | Nanotechnology | 116 | Nanotechnology |
| | Nuclear engineering | 112 | Nuclear engineering |
| | Petroleum engineering | 113 | Petroleum engineering |
| | Engineering nec | 114 | Engineering, not elsewhere classified |
| Health | Anesthesiology | 701 | Anesthesiology (postdocs and NFRs only) |
| | Cardiology | 702 | Cardiology (postdocs and NFRs only) |
| | Endocrinology | 704 | Endocrinology (postdocs and NFRs only) |
| | Gastroenterology | 705 | Gastroenterology (postdocs and NFRs only) |
| | Hematology | 706 | Hematology (postdocs and NFRs only) |
| | Neurology | 707 | Neurology (postdocs and NFRs only) |
| | Obstetrics and gynecology | 708 | Obstetrics and gynecology (postdocs and NFRs only) |
| | Oncology and cancer research | 703 | Oncology and cancer research (postdocs and NFRs only) |
| | Ophthalmology | 709 | Ophthalmology (postdocs and NFRs only) |
| | Otorhinolaryngology | 710 | Otorhinolaryngology (postdocs and NFRs only) |
| | Pediatrics | 711 | Pediatrics (postdocs and NFRs only) |
| | Public health | 712 | Public health |
| | Psychiatry | 713 | Psychiatry (postdocs and NFRs only) |
| | Pulmonary disease | 714 | Pulmonary disease (postdocs and NFRs only) |
| | Radiological sciences | 715 | Radiological sciences (postdocs and NFRs only) |
| | Surgery | 716 | Surgery (postdocs and NFRs only) |
| | Clinical medicine nec | 717 | Clinical medicine, not elsewhere classified (exclude DN, DO, DPM, MD and OD) |
| | Communication disorders sciences | 723 | Communication disorders sciences (exclude AuD) |
| | Dental sciences | 718 | Dental sciences (exclude DDS) |

TABLE A-17

## Mapping of 2019 GSS Codes and Fields

(Crosswalk)

| Broad field | Detailed field | GSS code | GSS field name |
|---|---|---|---|
| | Nursing science | 719 | Nursing science (include research master's and PhD only) |
| | Pharmaceutical sciences | 720 | Pharmaceutical sciences (exclude PharmD) |
| | Veterinary sciences | 721 | Veterinary sciences (exclude DVM) |
| | Other health nec | 722 | Health-related, not elsewhere classified (exclude DPT, DScPT, and OTD) |

AuD = Doctor of Audiology; DDS = Doctor of Dental Surgery; DN = Doctor of Naprapathy; DO = Doctor of Osteopathic Medicine; DPM = Doctor of Podiatric Medicine; DPT = Doctor of Physical Therapy; DScPT = Doctor of Science in Physical Therapy; DVM = Doctor of Veterinary Medicine; GSS = Survey of Graduate Students and Postdoctorates in Science and Engineering; MD = Doctor of Medicine; NFR =nonfaculty researcher; nec = not elsewhere classified; OD = Doctor of Optometry; OTD = Doctor of Occupational Therapy; PharmD = Doctor of Pharmacy; PhD = Doctor of Philosophy.

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2019.

# Notes

1 In this report, the term school refers to a graduate school, medical school, dental school, nursing school, or school of public health; an affiliated research center; a branch campus; or any other organizational component within an academic institution that grants an SEH degree.

2 See response rate 3 calculation in American Association for Public Opinion Research (AAPOR). 2016. *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys.* 9th ed, p. 62. Deerfield, IL: AAPOR.

3 The number of units added and deleted by coordinators who responded to the 2016 pilot survey was much greater than is typical for GSS coordinators. These increases are largely due to how data are organized in institutional information systems and the increased granularity of CIP codes relative to GSS codes rather than being a reflection of increased organizational complexity.

4 The OMB standards designate Hispanics as an ethnic group rather than a racial group. Following these standards, Hispanic is not counted as a race in GSS. Cognitive interviews with respondents have shown that this is a source of considerable confusion. For example, Black Hispanics and White Hispanics may be counted as “Hispanic, More than one race” rather than “Only one race, Hispanic.” The ethnicity and race categories were aligned to IPEDS by combining the “Hispanic/Latino, More than one race” and “Hispanic/Latino, One race only” categories. In 2008, these two Hispanic categories were collapsed into one: “Hispanic/Latino ethnicity (one or more races).”

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